Publications in Shalya Tantra : A Research Compilation

Prof. (Dr.) T.S. Dudhamal

Dr. Y.R. Meghani

1st Edition

Institute of Teaching and Research in Ayurveda
(Institute of National Importance)
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FOREWORD

The present research not only enhances surgical techniques and treatments for contemporary needs but also paves the way for future generations. While numerous qualitative and result-oriented studies have been conducted in research institutes like ITRA and the published articles on different topics are available in public domain. It is imperative that such data may be made publicly accessible, ensuring that researchers worldwide can utilize it effectively for further research or to understand the area of research in Ayurveda or complimentary medicine.

Jamnagar has long been recognized as a premier institute for Ayurveda research, setting benchmarks in clinical studies and drug development. The global scientific community increasingly acknowledges Ayurveda as a promising field for innovative research outcomes. Over the decades, research methodologies have evolved in response to the changing needs of society, creating a significant disparity between studies conducted in the 1980s and those of the modern era starting from the design of study to outcome measures.

With this perspective, the published data in different research journals or databases has been compiled systematically in context to diseases, conservative treatments, para-surgical procedures in this e-book. This e-book presents a comprehensive abstracts of all published studies in Shalya Tantra department of **Institute for Post Graduate Teaching & Research in Ayurveda (IPGT&RA),** presently known as **ITRA,** from 2009 to March 2024. It meticulously documents all published clinical studies, case reports providing insights into their objectives, methodologies, and final outcomes.

Prof. (Dr.) T.S. Dudhamal and Dr. Y.R. Meghani have meticulously compiled this e-book, titled **"Publications in Shalya Tantra: A Research Compilation"** with contributions from all faculty members and scholars of the Shalya Tantra Department. This work will undoubtedly serve as an invaluable resource for emerging researchers, aiding them in designing future clinical trials in the field of Shalya Tantra and Ayurveda research. I firmly believe that this compilation will offer immense benefits to research scholars in the contemporary era.

I extend my best wishes to Prof. Dr. T.S. Dudhamal and Dr. Y.R. Meghani for the successful completion of this significant scholarly contribution.

Prof. (Dr.) Tanuja Nesari
Director, ITRA, Jamnagar

Preface

Shalya Tantra, the surgical branch of Ayurveda, has a rich history rooted in the wisdom of Acharya Sushruta, often regarded as the "Father of Surgery." His pioneering contributions to surgical techniques and clinical procedures continue to inspire modern medical research. With the rapid advancements in contemporary medicine, the need for integrating traditional Ayurvedic surgical knowledge with modern scientific methodologies has become more significant than ever.

This book, **"Publications in Shalya Tantra: A Research Compilation",** is an effort to document and analyze various research approaches, pilot studies, and case-based investigations in Ayurvedic surgery. It aims to bridge the gap between classical knowledge and modern evidence-based practices, fostering a deeper understanding of the relevance and applicability of procedures described in Shalya Tantra.

Through this work, we have compiled already published research findings, methodologies, case studies, and clinical applications that contribute to the validation and advancement of Ayurvedic surgical practices. Our objective is to provide a structured and comprehensive reference for scholars, researchers, and practitioners in single platform who are dedicated to exploring the scientific potential of Shalya Tantra. We have additionally integrated hyperlinks to each published article, ensuring seamless access to the full content ensuring that this e-book serves as a dynamic and user-friendly resource.

As we launch this first edition, we hope to spark meaningful discussions, encourage collaborative research, and inspire a new generation of Ayurvedic surgeons to explore the uncharted possibilities of this ancient science. This e-book, open access and available exclusively in digital format which reflects our commitment to making Ayurvedic research more accessible in today's technology.

We extend our sincere gratitude to all the researchers, scholars, and practitioners who have contributed to this field. Constructive feedback and suggestions from readers are always welcome, as we strive to improve future editions of this work.

Let us embrace the wisdom of the past while moving forward with the promise of modern research, ensuring that the legacy of Shalya Tantra continues to thrive for generations to come.

Prof. (Dr.) T.S. Dudhamal

Dr. Y.R. Meghani

Acknowledgement

With profound gratitude, we extend our sincere appreciation to **Prof. (Dr.) Tanuja Nesari**, Director, ITRA, for her invaluable support in providing essential materials and granting permission for the online publication of this e-book through the ITRA website. We are also deeply indebted to her for graciously penning the foreword.

We express our heartfelt thanks to **Prof. Vd. Hitesh Vyas**, Dean, ITRA, whose unwavering encouragement has been instrumental in inspiring the author to undertake this scholarly endeavor, thereby contributing to the dissemination of crucial research in the field of **Shalya Tantra**.

Our sincere regards are also due to our esteemed former **Head of Department, Prof. (Dr.) Chaturbhuja Bhuyan**, the former **Head of Department** late **Prof. (Dr.) Sanjaykumar Gupta** and **Dr. Vyasdeva Mahanta** whose dedication and contributions have significantly shaped the department's research initiatives.

We further extend our appreciation to **Dr. P.B. Joshi, Dr. Joyal Patel, Dr. Bhoomi Soni, Dr. Naresh Ghodela, Dr. Manisha Kapadiya, Dr. BhinyaRam Chaudhary, and Dr. Reshma Rajeevan** for their commendable efforts and dedication to the department's academic and research pursuits.

A special note of gratitude is reserved for **Dr. Ipsita Panda, PhD Scholar**, for her exceptional support in editing and designing this e-book.

We also recognize and commend the diligent efforts of all PhD and PG scholars engaged in research endeavors, along with their mentors and the esteemed faculty of the **Shalya Tantra Department**, whose guidance has been invaluable in advancing academic inquiry.

We extend our sincere appreciation to the **current PhD** and **PG scholars** of **Shalya Tantra, ITRA, Jamnagar**, for their dedication, perseverance, and contributions to the ongoing research and academic excellence of the department.

Prof. (Dr.) T.S. Dudhamal

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He completed 5 Research Projects as principal investigator and two research projects are going on. He is working as reviewer and subject editor in many scientific journals like AYU, AAM, JAIM, JRAS, IJA-CARE, IJTK, JACR.

As academic, clinical and research activities he has been worked in many committees as committee members at national and international level. He has been served as Nodal officer of 100 bedded Covid Care Centre (CCC) IPGT&RA Hospital, Jamnagar during first and second wave of Covid-19 pandemic.

His area of expertise includes Wound Healing, Ksharasutra, Ana-rectal surgery, Leech application, Musculo-skeletal disorders, Urinary disorders.

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❖ Research related to *Granthi* (Lipoma) (2).

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Role of honey (Madhu) in the management of wounds (Dushta Vrana)[1]

CASE DESCRIPTION: A 70-year-old female patient of *Vata-Kaphaja Prakriti* had a chronic infected wound that involved entire anterior tibial aspect of the right lower limb. She had complaint of burning pain in the wound as a result of a drug reaction, foul-smelling pus discharge, difficulty in walking, and occasional fever. She had no systemic disease. She had been taking treatment for the wound without any relief. She had history of hypersensitivity reactions to ibuprofen and cotrimoxazole.

ON EXAMINATION: A large (22 × 4.5 cm) ugly-looking ulcer was present on the anterior aspect of the right leg, extending from the knee to the ankle joint. There was foul-smelling pus discharge and local swelling.

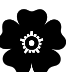
INVESTIGATION: The pus culture report showed presence of Staphylococcus aureus. All routine laboratory investigations were in the normal range.

THERAPEUTIC INTERVENTION: Every morning the wound was first treated with freshly prepared lukewarm *Neem* bark decoction, which was poured on the wound while it was simultaneously cleaned with sterile swabs. After cleaning, *Madhu* was applied in adequate quantity with the help of a spatula and the wound was covered with sterile gauze and loosely bandaged. Along with the local wound treatment, the following drugs were given orally in powdered form 12 hourly: *Yashtimadhu* 2 gm, *Shatavari* 2 gm, *Gokshura* 2 gm, and *Guduchi* 2 gm. The drugs were administered along with lukewarm water.

RESULT: At the end of the 5th week, the wound had healed completely, leaving only a minimal scar.

Dushta Vrana on the anterior aspect of the right leg before treatment at the first day.	Healed scar on the anterior aspect of the right leg after treatment.

1. Tukaram S. Dudhamal, S. K. Gupta, C. Bhuyan. Role of honey (Madhu) in the management of wounds (Dushta Vrana). International Journal of Ayurveda Research | October-December 2010 | Vol 1 | Issue 4. DOI: 10.4103/0974-7788.76793 www.ijaronline.com
https://www.researchgate.net/publication/50940631_Role_of_honey_Madhu_in_management_of_wounds_Dushta_Vrana



Clinical evaluation of Shikari (Cordia macleodii) Ghrta on Vrana Ropana (wound healing) property[2]

PURPOSE: This study aims to evaluate the wound healing property of *Shikari Ghrita*.

MATERIAL AND METHODS:

STUDY DESIGN: An open labelled randomized clinical trial.

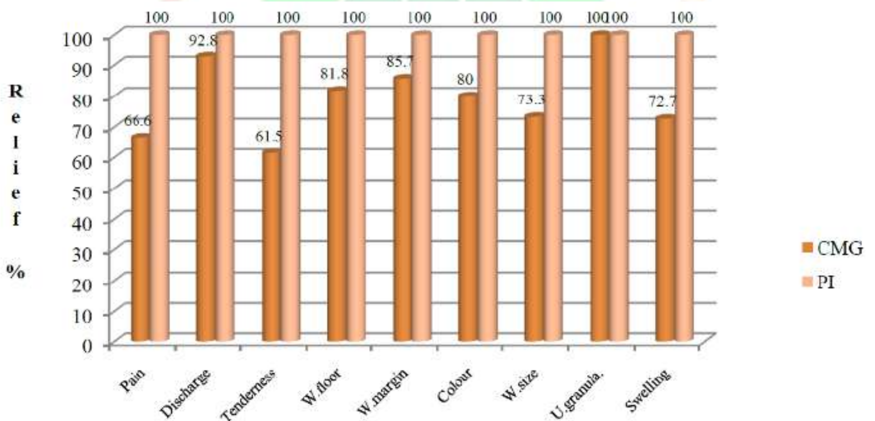
SELECTION OF PATIENTS: 20 patients of *Shuddha Vrana* selected from post-operative created wound of piles, fissure, cyst and wound of accidental injuries irrespective of their age, sex and religion. Patients suffering from wounds associated with systemic diseases like diabetes mellitus, tuberculosis, malignancy burn wounds, wounds occupying large surface area, chronic infected wounds, non-healing ulcers etc. were excluded from the study.

LABORATORY INVESTIGATION: Routine blood examination for TLC, DLC, Hb%, ESR, FBS and routine and microscopic examination of urine was conducted.

METHODS & GROUPING: The selected patients were allotted into two groups i.e. Cordia macleodii *Ghrita* group termed as **CMG** and Povidone Iodine ointment group termed as **PI**. Patients of both groups were treated for 21 days and the assessment of parameters was done at 7th, 14th and 21st day of treatment.

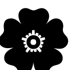
RESULT AND DISCUSSION: Effect of therapy in **CMG** group, on 7th day of observation: significant change in sign and symptoms was observed only in discharge, tenderness, wound margin and wound size. On 14th day of observation significant change in sign and symptoms was observed only in discharge, tenderness, wound margin and wound size, unhealthy granulation and swelling and no change was observed in pain, wound floor and colour of wound. At 21st day significant effect was observed in all parameters. In **PI** group, highly significant change were observed in all parameters at 7th, 14th as well as 21st days of observational periods except wound floor at 7th day. In **CMG** group, 40% of the patients were cured and 60% showed marked improvement, while in **PI** group, 100% patients were cured.

Graph 1: Comparative effect of therapy on wound healing parameters at 21st day



CONCLUSION: C. macleodii *Ghrita* showed highly significant effect on 21st day of observation while the standard drug i.e. Povidone Iodine shows highly significant effect on all observational periods in all parameters. C. macleodii leaf should be tried in other dosages forms to prove its clinical efficacy in wound healing.

2. Sharma Ashish, Acharya RN, Gupta SK, Dudhamal TS, Mohanto VD. Clinical evaluation of Shikari (*Cordia macleodii*) ghrita on Vrana ropana (wound healing) property. Ayurpharm Int J Ayur AlliSci.2013;2(4):98104.[ISSN23195436]www.ijsit.com
https://www.academia.edu/11735265/CLINICAL_EVALUATION_OF_SHIKARI_Cordia_macleodii_GHRITA_ON_VRANA_ROPANA_WOUND_HEALING_PROPERTY



Katupila (Securinega leucopyrus) as a potential option for diabetic wound management[3]

CASE DESCRIPTION: A 55-year-old male diabetic patient of *Pitta-Kaphaja Prakriti* had infected diabetic wound at mid lateral tibial aspect of the right lower limb. Patient complained of burning pain in the wound, foul-smelling pus discharge, difficulty in walking and occasional fever. Patient had type-II diabetes mellitus since last 15 years and was on anti-diabetic medicines irregularly.

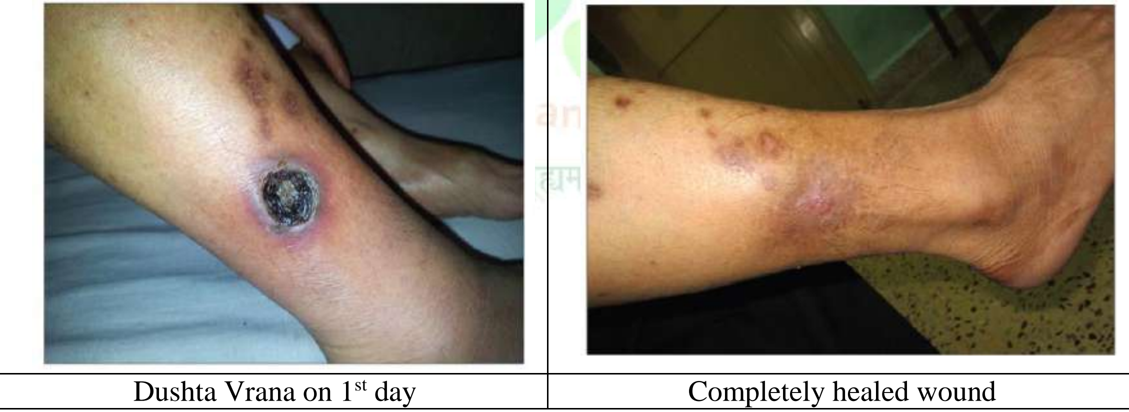
ON EXAMINATION: A large (4.5 cm × 4 cm × 2 cm) gangrenous and round shaped ulcer was noted at the right lower leg. There was foul-smelling pus discharge and local swelling with necrosed subcutaneous tissue and skin. Symptoms were existing since a month and became severe with necrosis since last 7 days.

INVESTIGATION: Haemogram analysis included FBS, WBC count, DLC, Hb%, blood urea and serum creatinine.

THERAPEUTIC INTERVENTION: The wound was cleaned with freshly prepared *Panchavalkala Kwath*, and *Katupila* paste mixed with sesame oil was applied in adequate quantity. The wound was covered with sterile gauze and loosely bandaged once daily in the morning. During the treatment anti diabetic drug (metformin 500 mg) was continued.

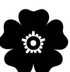
RESULT: After 3 days, the application of paste, the necrosed skin and subcutaneous part of the wound was removed without surgical debridement. The swelling and redness also reduced remarkably. Dressing continued with Katupila paste. On 7th day, there was fresh granulation tissue without any swelling and slough. On 15th day, fresh contracting margins appeared as a sign of wound healing. The filling of the wound base with fresh and well-vasculated tissues and healthy granulation was seen on the wound surface. The wound became fresh having healthy granulation within 15 days. Wound healed completely within 30 days with minimum scar, which proves the "*Savarnikarana*" (producing normal skin color) effect of *Katupila*.

CONCLUSION: *Katupila* paste has potential to heal the infected diabetic wound. This observation needs to be studied in more patients to explore better options for diabetic wound management.



Dushta Vrana on 1st day	Completely healed wound

3. Ajmeer AS, Dudhamal TS, Gupta SK, Mahanta V. Katupila (Securinega leucopyrus) as a potential option for diabetic wound management. *J Ayurveda Integr Med*. 2014;5(1):60-63. doi:10.4103/0975-9476.128872; www.jaim.in
https://www.researchgate.net/publication/262193834_Katupila_Securinega_leucopyrus_as_a_potential_option_for_diabetic_wound_management#:~:text=In%20acute%20and%20chronic%20wounds,in%20paste%20form%20once%20daily



Topical application of Katupila (Securinega leucopyrus) in Dushta Vrana (chronic wound) showing excellent healing effect: A case study[4]

CASE DESCRIPTION: A female patient, aged about 40 years, had complaints of non-healing chronic wound on the right buttock since 2 months. Patient had taken treatment for wound since last 1 month with dressing by antiseptic solution without any improvement. There was no past history of major systemic disease or surgery.

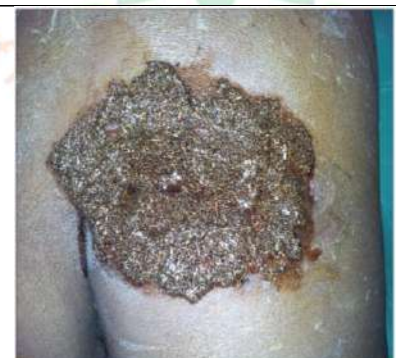
ON EXAMINATION: The local findings revealed a foul smelling deep wound, having fixed and black sloughing area of 3 inch × 3 inch × 1 inch dimension.

INVESTIGATION: The culture swab report of the wound was done, and was found to be positive for Staphylococcus aureus infection. All the other laboratory findings were found to be within normal limits except haemoglobin level, which was 8 g %.

THERAPEUTIC INTERVENTION: Local dressing of wound was carried out by *Katupila* powder mixed with sesame oil. The wound was cleaned with decoction of *Panchavalkala*. The dried leaf powder of *Katupila* mixed with sesame oil was applied on wound once daily. The *Katupila* dressing was continued until complete healing achieved and the result was assessed at regular intervals. Along with local dressing; capsule of hematinic drug composed of Vitamin B-12, ferrous fumarate, vitamin C and folic acid was administered orally once a day for 30 days.

RESULT: The deep seated slough, which was hard to remove, started to dissolve from the base and wound became clean and healthy on 4th day. On 21st day, wound size was markedly reduced with normal skin coloration at the healed area. On the 35th day, the wound was healed completely with minimum scar tissue formation. After completion of a month, the hemoglobin was increased and became 10 gm %.

CONCLUSION: The topical application of *Katupila* (S. leucopyrus [Willd.]). Muell paste with sesame oil was found very effective and had shown excellent healing effect in this case of chronic and non-healing wound.

		
Dushta vrana (infected non-healing wound) at left buttock on 1st day of treatment	After application of *Securinega leucopyrus* paste	Complete healed wound with minimum scar on the 35th day

4. Ajmeer AS, Dudhamal TS , Gupta SK , Mahanta VD; Topical application of Katupila (Securinega leucopyrus) in Dushta Vrana (chronic wound) showing excellent healing effect: A case study; DOI: 10.4103/0974-8520.146238; AYU |Apr-Jun 2014 | Vol 35 | Issue 2; www.ayujournal.org
https://www.researchgate.net/publication/301478716_Topical_application_of_Katupila_Securinega_leucopyrus_in_Dushta_Vrana_chronic_wound_showing_excellent_healing_effect_A_case_study

Diabetic wound treated with herbal paste of Securinega leucopyrus (Willd.) Muell-Case Report[5]

CASE DESCRIPTION: A 61 year old man with type-2 diabetes mellitus consulted to outpatient department of Ayurved hospital. Patient was married, having two children, non-alcoholic and had family history of diabetes mellitus. Patient had extensive history of diabetes mellitus since last 30 years alongwith symptoms of diabetic neuropathy i.e., mild numbness in lower extremities. He had undergone both angioplasty (placing balloon and stent) and open heart surgery (CABG) two times previously. Patient also had past history of multiple boils at lower leg and taken treatment form modern medicines for one month. He was taking Metformin 500 mg two times a day before meal irregularly. The fasting blood sugar was 247 mg/dl and postprandial blood sugar was 297 mg/dl at the time of first consultation in surgical OPD. Patient was suffering from non-healing wound at left lower leg since two and half months.

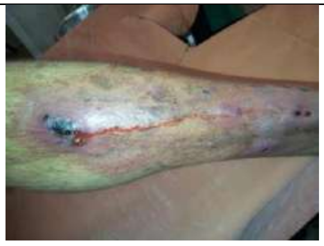
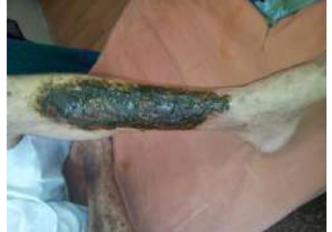
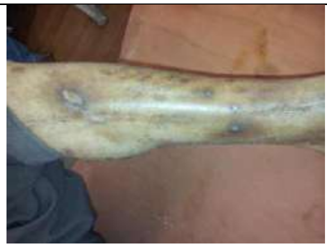
ON EXAMINATION: There was an oval shaped wound at anterior tibia of left leg measuring 3x2 cm. Wound surface was blackish with red surrounding skin & exudates, minimal odor and swelling.

INVESTIGATION: The swab culture of pus showed presence of Staphylococcus aureus S.

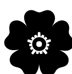
THERAPEUTIC INTERVENTION: The patient commenced the treatment from first day onwards with local application of paste of S. leucopyrus leaves powder in sesame oil daily.

RESULT: On first consultation wound was blackish with exudates with red discoloration of surrounding skin and peripheral swelling. On third day swelling was reduced, black with sloughing out of necrosed tissues and clean wound (*Shudha avashtha*). The vein was taken off for bypass surgery (coronary artery graft) from the left leg so venous drainage for that site might have been inadequate. On the seventh day, the base of wound was found to be well vascularised with filling of wound base. On tenth day granulation with pigmentation and contracted wound margins with reduced wound diameter which was 1X1 cm was found. Second swab culture was done, and found negative for Staphylococcus aureus, which confirmed the eradication of infection from wound. On fifteenth day wound healed completely with minimum scar and normal color of the surrounding skin.

CONCLUSION: This study showed encouraging results in diabetic wound healing with *S. leucopyrus* leaves powder mixed with sesame oil and have potency for further evaluation in larger population.

		
Wound status on first consultation	Application of S. leucopyrus powder mixed with sesame oil	Complete wound healing on 15th day after treatment

5. Dudhamal TS, Ajmeer AS. Diabetic Wound Treated With Herbal Paste of *Securinega Leucopyrus* (Willd.) Muell - Case Report. International Journal of Advanced Ayurvedic and Herbal Medicine (IJAAHM) 2015; 1(1): 1-5. www.cloud-journals.com.
https://www.researchgate.net/publication/297714816_Diabetic_Wound_Treated_With_Herbal_Paste_of_Securinega_Leucopyrus_Willd_Muell_-_Case_Report



Wound healing potential of Pancavalkala formulations in a post fistulectomy wound[6]

CASE DESCRIPTION: A 35 year old male patient working as a cook, of *Vatapittaja* predominant *Prakṛuti* had complaints of discharge per anum, indurations and intermittent pain at peri-anal region since the last 5 years. He had the following morphological characteristics: thin build, dry skin, dry hair, unstable gait, and prominent vessel depicting characters of *Vata* predominant *Prakṛuti* as per *Samhitas*, and also some *Pitta Prakṛti* predominant characters like fair complexion, moles on skin, grey hair, reddish eyes and excess sweating. He was used to non-vegetarian and spicy diet.

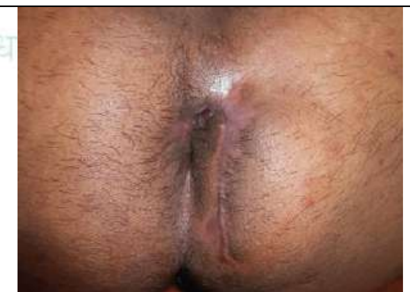
ON EXAMINATION: An external opening was observed at 1 o'clock, 4 cm away from anal verge.

INVESTIGATION: The laboratory investigation for blood, urine, and stool were conducted and found within normal limits. Chest X-ray and USG of whole abdomen also had no abnormal signs.

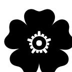
THERAPEUTIC INTERVENTION: Appropriate antibiotics and analgesics were given for the initial 3 days to minimize infection & infalammation. *Avagahasvedana* by water mixed with *Panchavalkala Kwatha* twice a day was advised throughout the treatment. Cleaning of wound with freshly prepared *Pancavalkala Kwatha* and dressing with *Panchavalkala* ointment was done daily. *Haritaki* powder 5 gm at bed time was prescribed in case of constipation. During the treatment, patient was advised a diet which included green vegetables, fruits, rice, roti (bread) and plenty of water. Patient was instructed not to consume non-vegetarian, spicy food, oily food, junk foods and alcohol. He was also advised to avoid long sitting and riding/travelling during the course of treatment.

RESULT: The wound size at the end of partial fistulectomy was 10×4×3cm, full of slough and fibrosed tissue. The initial length of applied *Kṣharasutra* in the remaining part of fistulous tract was 8 cm. The *Kṣharasutra* was changed after every seven days till the cut through of tract with complete healing was achieved. The wound size was observed to be reduced with contracted margin and healthy granulation tissue. The wound healed completely with normal scar after two and a half month period.

CONCLUSION: *Bhagandara* (fistula-in-ano) can be healed after partial fistulectomy, followed by *Kṣharasutra* application and other adjuvant therapies with *Panchavalkala* ointment for *Sodhana* as well as *Ropaṇa* of the wound. This approach needs further investigation on a larger number of patients.

	
Fistula-in-ano treated with partial fistulectomy and *kṣharasutra* application	Complete wound healing with normal scar after two and half months

6. Meena RK, Dudhamal T, Gupta SK, Mahanta V. Wound healing potential of Pañcavalkala formulations in a postfistulectomy wound. Ancient Sci Life (ASL) 2015;35 (2):118-21.[ISSN p-0257-7941, e- 2249-9547] www.ancientscienceoflife.org
https://www.researchgate.net/publication/286903275_Wound_healing_potential_of_Pancavalkala_formulations_in_a_postfistulectomy_wound



Management of Madhumehajanya Vrana (diabetic wound) with Katupila (Securinega leucopyrus [Willd] Muell.) Kalka[7]

PURPOSE: To assess the efficacy of *Katupila Kalka* in diabetic wound.

MATERIALS AND METHODS:

STUDY DESIGN: An open labelled clinical trial to compare the efficacy of *Katupila Kalka* and standard drug betadine ointment local application on 23 diagnosed patients of diabetic wounds.

INCLUSION CRITERIA: Diagnosed cases of *Madhumehajanya Vrana* with Type I and Type II diabetes mellitus of 18–70 years age of either sex.

EXCLUSION CRITERIA: The patients with a history of TB, wounds other than diabetic wounds, uncontrolled hypertension, cardiac diseases such as MI, coronary artery disease, & ischemic heart disease were excluded. Patients with HIV, VDRL and hepatitis-B positive were also excluded.

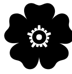
INVESTIGATIONS: Routine haematological parameters such as CBC, BT, CT, ESR, FBS, PPBS, HBsAg, VDRL, and HIV; routine and microscopic urine analysis were done.
X-ray of the affected foot (dorsoventral and lateral view) was done to rule out the osteomyelitis of bone.

GROUPING AND POSOLOGY:
Group A (n = 13): *Katupila Kalka* (paste of S. leucopyrus leaves) with *Tila Taila* (sesame oil) was applied locally on the affected part. The dressing was done once in the morning up to 1 month or healing of wound which was earlier.
Group B (n = 10): Patients were treated with dressing of betadine ointment once daily in the morning and treated as the standard control group.
Patients were advised to continue their anti-diabetic and anti-hypertensive medications during treatment in both groups.

RESULTS: Infection was controlled within 3–4 days, and foul odour after 3 days in patients of Group A. In Group B, foul odour from ulcer continued until the wound were healed.
The surrounding skin color became normal within 7 days in maximum patients (76%) of Group A, while only 32% patients showed normal peri-wound skin color in Group B.
In Group A, 12 patients wound size was reduced completely within 28 days, whereas in Group B, only 29% of patients wound size was reduced completely within 28 days.
In Group A, signs of infections relieved 61% by the 7th day and totally relieved at the end of 28th day, whereas in Group B, patients infection was relieved 41% by the end of 28th day.
In Group A, 92.3% of patients were completely cured, whereas in Group B, 20% of patients were completely cured.

CONCLUSION: *Katupila Kalka* (paste) possesses highly qualitative efficacy in "*Vrana Ropana*" with fine scaring. Therefore, it may be recommended that this cheap and easily preparable application may be prescribed for in diabetic wounds for further appraisal.

7. AS Ajmeer, Dudhamal TS, Gupta SK. Management of Madhumehajanya Vrana (diabetic wound) with Katupila (Securinega leucopyrus [Willd] Muell.) Kalka. Short Communication. AYU 2015;36 (3):353-55. [ISSN: p-0974-8520 e-0976-9382] www.ayujournal.com.
https://www.researchgate.net/publication/304072055_Management_of_Madhumehajanya_Vrana_diabetic_wound_with_Katupila_Securinega_leucopyrus_Willd_Muell_Kalka



Wound healing activity of Arjuna bark powder in *Dushta vrana* (non-healing venous ulcers) - a case report[8]

CASE DESCRIPTION: A 65 year old male patient had complaints of multiple ulcers at medial aspect of right lower leg. He also suffered from severe pain, serous discharge & swelling of leg for 2 months. On examination one large ulcer (6cm x 4cm) was found at the medial aspect of right leg. Prominent varicosity at medial side of both lower limbs was observed. Patient had taken medicine & local dressing with antiseptic solution from local doctor without any relief.

Patient was a newspaper vendor for last ten years and was used to commute by bicycle. He was addicted to tobacco chewing daily for 10-15 times. He had no other relevant medical history of diabetic mellitus, hypertension, tuberculosis, venereal diseases, bronchial asthma, anaemia, cardiac diseases or any other major ailments. He also did not report any past surgical history.

INVESTIGATION: Routined blood investigations for CBC, blood sugar level & sr. creatinine were found to be normal, except increased white blood corpuscles and neutrophils. The pus culture report was negative for both gram positive & gram negative bacteria, and fungus.

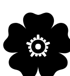
THERAPEUTIC INTERVENTION: Wound was cleaned with normal saline and then *Arjun* bark powder mixed with coconut oil was applied daily once in the morning. After 7 days the patient was discharged from the hospital, and scheduled for daily dressing on OPD basis. Assessment of wound was done on the basis of symptomatic relief. Photograph was taken at weekly interval until complete wound healing was achieved.

RESULT: In first consultation patient had severe pain, mild swelling, serous discharge and large wound at medial malleolus. Sufficient amount of prepared *Arjuna* bark powder and coconut oil was applied on all wounds and bandaged. The symptoms like pain, swelling and discharge were markedly reduced and wound became clean with mild slough after 7 days. Treatment continued daily on OPD basis and weekly assessed, where wound base became clean due to increased circulation and neo-vascularisation after 15 days. Gradually wound size reduced due to epithelisation and wound contraction. Wound remained half of its size after one month. Those multiple non healing venous ulcers at medial aspect of right lower leg healed completely after one and half months without complication.

CONCLUSION: The paste of *Arjuna* and coconut oil has healing potential in management of venous ulcers which needs further evaluation.

Varicose Ulcer	Arjun Bark Powder and Coconut Oil application	After 15 Days	Healed wound after one and half month

8. Dudhamal TS. Wound healing activity of Arjuna bark powder in Dushta vrana (Non healing venous ulcers) - A Case Report. Journal of Ayurvedic and Herbal Medicine 2016; 2(4): 102-103. [ISSN: 2454-5023]. http://www.ayurvedjournal.com
https://www.researchgate.net/publication/308902485_Wound_healing_activity_of_Arjuna_bark_powder_in_Dushta_vrana_Non_healing_venous_ulcers_-A_Case_Report



Healing potency of fresh Katupila Kalka (Securinega leucopyrus) in DustaVrana (non-healing wound) - a single case report[9]

CASE DESCRIPTION: A case of 65 years old male patient had complaints of non-healing ulcer on medial malleolus of left foot since three months, pain during walking, discharge and swelling. Before one year he had suffered from an accident and got fracture at tibial part of his left foot. He was hospitalised and plate was implanted to the tibia with boot plaster for three weeks, after which he was completely healed. The patient then got an injury at his left medial malleolus which was extended upto the implanted plate site. Due to negligence in wound care the infection escalated and gradually presented with symptoms of pus discharge and bad odour.

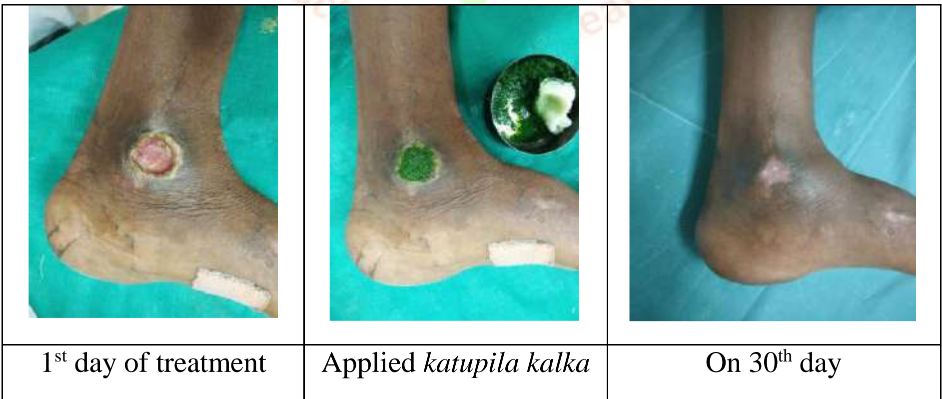
ON EXAMINATION: It was observed that there was a round shape infected wound at the medial malleolus of left foot of size 2.2 cm x 2.1 cm x 2mm, with mild inflamed wound margins, covered with unhealthy granulation tissue. Left inguinal lymph nodes were normal, and patient was afebrile.

INVESTIGATION: Routined blood investigations were done, and found within normal limit. The X-ay left foot was normal, without any bony involvement or osteomyelitis.

THERAPEUTIC INTERVENTION: The patient was advised for foot bath with warm water before dressing. The fresh leaves of *Katupila* were collected and crushed in *Khalva Yantra* and kept ready. The wound was first cleaned with normal saline, and then applied with freshly prepared *Kalka*. Then the wound was covered with sterile gauze piece and bandaged. This procedure was followed daily once in the morning for four weeks. Along with local dressing, *Triphala Guggulu* (500mg) 2 tablets three times a day was given with luke warm water for four weeks.

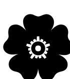
RESULT: In first week swelling and pain subsided completely, and patient was able to walk properly. On the 7th day it was observed that bad odour was reduced, fresh granulation tissue was noted, marginal elevation was reduced with floor of the wound being freed from slough and pain was reduced. The wound was healed completely within 4 weeks with minimal scar formation and normal skin coloration.

CONCLUSION: *Katupila Kalka* possesses *Shodhan* (cleaning), *Ropan* (healing) & *Savarnikaran* (depigmentation) properties, and can heal the non-healing wounds.



1st day of treatment	Applied *katupila kalka*	On 30th day

9. Bijendra Shah, Ghodela NK, Dudhamal TS. Healing potency of fresh Katupila Kalka (Securinega leucopyrus) in DustaVrana (non-healing wound) - A single case report. Ayurlog (National Journal of Research in Ayurved Science) -2017; 5 (Ayur Kaushalya special issue):134-138. [ISSN: 2320-7329] www.ayurlog.com
https://www.researchgate.net/publication/315045801_Healing_potency_of_fresh_Katupila_Kalka_Securinega_leucopyrus_in_Dusta_Vrana_non-healing_wound-A_single_case_report



Efficacy of Kshara application in post fistulectomy hyper granulation: a case study[10]

CASE DESCRIPTION: A 25 year old male patient developed hyper granulation after partial fistulectomy and *Kshara Sootra* threading. The dressing was continued after surgery to 30th postoperative day. Patient had no complaint until then. On 30th post-operative day, he developed abnormal granulation tissue at his wound site. This hyper granulation tissue formation delayed wound healing process by hampering normal tissue formation.

ON EXAMINATION: There was elevation of the wound margin, whitish discoloration of the floor of the wound, and also presence of slough along with bad odour. The wound was situated in the perianal region, with 5 cm×3 cm size, having inflamed & elevated border, and abnormal granulation tissue. The base of wound was indurated with mild pus discharge, and surrounding skin was whitish red in colour.

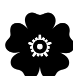
METHOD OF KSHARA KARMA (LOCAL APPLICATION OF KSHARA): The dressing of wound was done daily with *Apamarga Kshara* after rinsing it with normal saline. The applied *Kshara* on hyper granulation tissue was kept in situ for minimum 100 *Matra* (approx. -2 minutes). Then the site was rinsed with lime water to neutralize, and the wound was packed with *Jatyadi Taila* gauze piece. The routine post-operative protocol was continued i.e., sitz bath with *Pancavalkal Kwatha* twice daily. *Triphala Guggulu* (500mg) 2 tab three times a day was given with luke warm water and *Erandbhrishtha Haritaki* 5gm at night with luke warm water was given orally.

RESULT: After application of *Apamarga Kshara* on the wound, there was reduction in elevation of the wound edges and hypergranulation of the wound floor. The symptoms like inflammation, tenderness and pus discharge were also remarkably reduced after 3 days. It was observed that the abnormal granulation tissues totally disappeared on the 3rd day of dressing. *Kshara* application and dressing was continued, and on 7th day the patient was free from inflammation, tenderness and hypergranulation.

CONCLUSION: *Apamarga Kshara* application has the potential to scrape out the hypergranulation tissues by its *Lekhana* property providing a healthy floor for the wound recovery. It is a very minimal invasive and less time consuming procedure, and causes complete eradication of hypergranulation.

Hyper granulation on wound	*Kshara* application and dressing	After 3 days	After 7 days

10. Komang Sudarmi, Dudhamal TS. Efficacy of Kshara Application in post Fistulectomy Hypergranulation- A case Study. Ayurline: IJRIM International Journal of Research in Indian Medicine April-June 2017;1(2): 42-46. [e-ISSN: 2456-4435] www.ayurline.in
https://www.researchgate.net/publication/318969301_International_Journal_of_Research_in_Indian_Medicine_Efficacy_of_Kshara_Application_in_post_Fistulectomy_Hypergranulation-A_case_Study



Clinical potentiality of *Dhanvayas* (Fagonia cretica linn.) paste in the management of chronic wound - a case report[11]

CASE DESCRIPTION: A 65 year old male patient had complaints of lower leg wound on anterior aspect of left leg with symptoms of pain, serous discharge, edematous margins, peripheral cellulitis and fever since last 4 months. Patient had undergone some local dressing procedures with antiseptic solution from local doctors without any relief, so he consulted the Ayurved hospital. As the patient was a worker in salt production industry in coastal area of Jamnagar, he had to work long hours in saline areas which are more prone to retain the moist condition and aggravates the symptoms. Patient had no previous history of diabetes mellitus (DM), hypertension, cardiac disease and familial tuberculosis.

ON EXAMINATION: The wound was of length and width of 8cm x 4 cm size on tibial region of the left lower leg. Serous discharge with bad odour and circumjacent swelling noticed, suggestive of local infection. Culture report of discharge showed presence of pseudomonas and E-coli microbes.

INVESTIGATION: The blood investigations were found within normal limit.

THERAPEUTIC INTERVENTION: Wound was daily cleaned with *Dhanvayas Kwatha* (decoction) and then applied with *Dhanvayas* power mixed with distilled water once daily in morning. Wound was assessed weekly for symptomatic relief in sign and symptoms.

RESULT: At the end of 6th week of regular dressing with *Dhanvayas* powder paste, wound was completely healed with proper contraction, healthy base and healed scar.

CONCLUSION: *Dhanvayas* powder (*Fagonia cretica* Linn.) showed wound healing activity in chronic infected wound which needs further evaluation in larger samples.

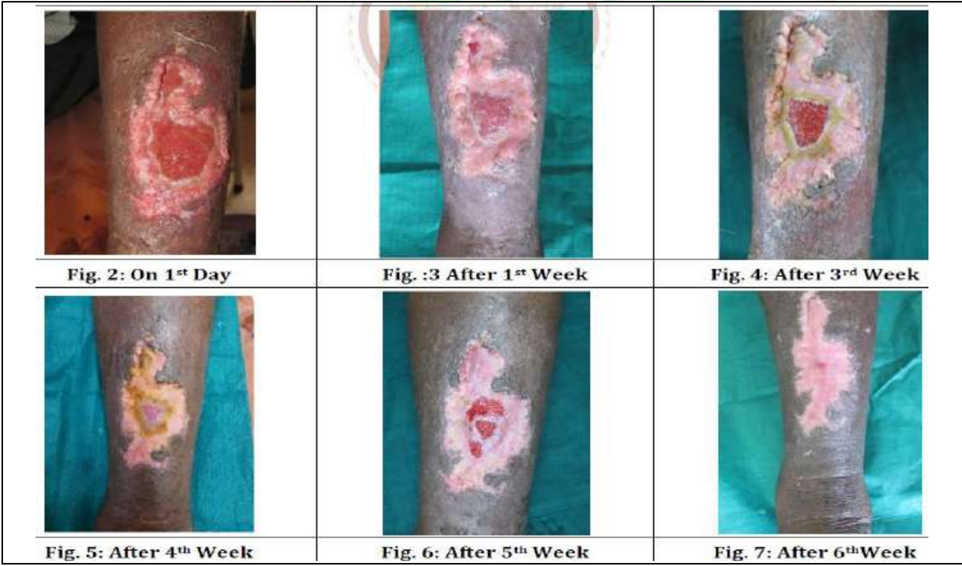
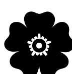


Fig. 2: On 1st Day | Fig. :3 After 1st Week | Fig. 4: After 3rd Week

Fig. 5: After 4th Week | Fig. 6: After 5th Week | Fig. 7: After 6th Week

11. Ghodela NK, Dudhamal TS. Clinical Potentiality of Dhanvayas (*Fagonia cretica* Linn.) Paste in the Management of Chronic Wound- A Case Report. AYUSHDHARA, 2016;3(6):893-895. [ISSN: p-2393-9583 e-2393-9591]. http://ayushdhara.in
https://ayushdhara.in/index.php/ayushdhara/article/view/232



Management of non-healing ulcer with local application of Yastimadhu Ghrita (Glycyrrhiza Glabra L.): a single case study[12]

CASE DESCRIPTION: A male patient of 38 years, presented with non-healing ulcer on the lateral aspect of right ankle joint since two and half year. Patient had a history of serious accident before two and half year. He was operated (debridement done) in private hospital with regular dressing done by antiseptic solution till last one year without any improvement in the ulcer. Patient was addicted to tobacco chewing but had stopped it since last one year. He was habituated to long standing (8-10 hours) for business purposes for the past 22 to 30 years.

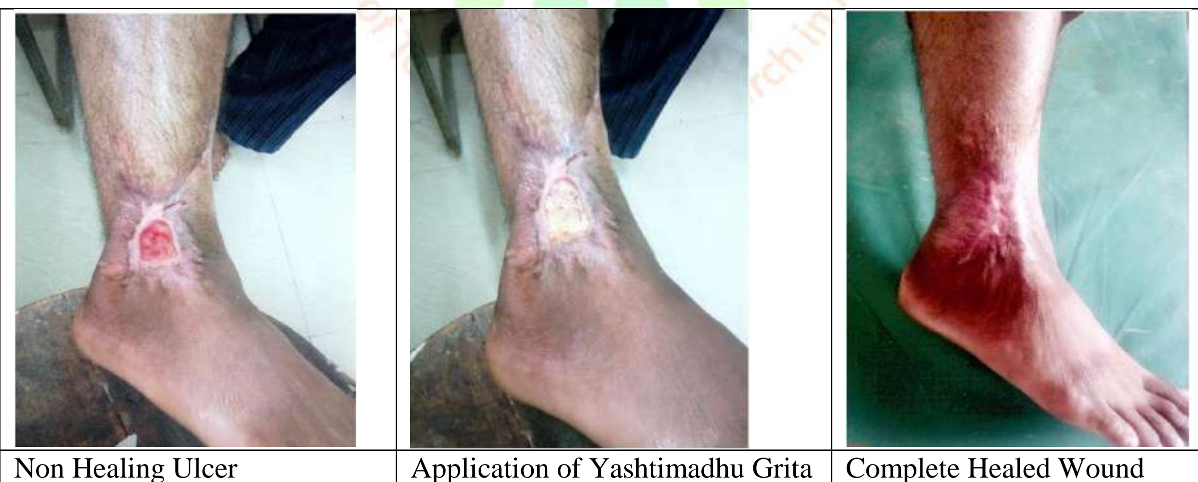
ON EXAMINATION: The local findings revealed a reddish large ulcer with sloping edges, along with mild serous discharge around lateral malleolus of the right leg. The ulcer measured 5 cm in length, 3 cm in width, and 2 cm in depth, with previously operated scar and blackish discoloration around right ankle joint and feet.

INVESTIGATION: X-ray of ankle joint and the arterial color Doppler study of the affected lower limb were normal. The laboratory investigations results were also within normal limit and no organism was isolated in discharge culture. The diagnosis was made as non-healing ulcer due to post traumatic wound after debridement.

THERAPEUTIC INTERVENTION: The wound was cleaned with normal saline and then applied with *Yashtimadhu Ghrita* once daily. The dressing was continued until complete healing achieved, and the result was assessed at regular intervals. Along with local dressing; *Manjisthadi Kwath* and *Rasayana Choorna* were administered orally twice a day for 2 months.

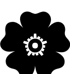
RESULT: After one month, the wound size was markedly reduced with normal skin coloration of the healed area. On the completion of 2 months the wound was healed completely with minimum scar tissue formation.

CONCLUSION: The local application of *Yastimadhu Ghrita* was found very effective and had shown excellent healing effect in this case of chronic and non-healing wounds.



Non Healing Ulcer	Application of Yashtimadhu Grita	Complete Healed Wound

12. Jigna Patel, Dudhamal TS. Management of Non healing ulcer with local application of Yastimadhu Ghrita (*Glycyrrhiza glabra* L.)-A single case study. IJAMY (Indian Journal of Ancient Medicine and Yoga 2017;10(2):73-76. (pISSN 0974- 6986, eISSN 0974 – 6994). www.rfppl.com. https://www.researchgate.net/publication/360573706_Management_of_Non_Healing_Ulcer_with_Local_Application_of_Yastimadhu_Ghrita_Glycyrrhiza_Glabra_L_A_Single_Case_Study



Thumari oil (Securinega leucopyrus) in the management of diabetic foot ulcer-a case report[13]

CASE DESCRIPTION: A 60 year old woman with type-2 diabetes mellitus for four years, had complaints of sore on planter aspect of second and third digit for a week and discharge few days later. Patient ignored treatment and infection spreaded. Patient was suffering from non-healing ulcer at dorsal aspect of right foot with exposed tendon, distal gangrene & foul odour (Waganar Grade 4 and 5). Swab culture revealed presence of Pseudomonas aeruginosa and E.Coli. She had normal BP (130/80mmof Hg) and pulse rate 68/min. The laboratory investigations were found within normal limit.

ON EXAMINATION: **Site**: over ventral aspect of right foot; **Size**: 8cm X 5cm X 2mm; **Number**: 1; **Edge** and **margin**: inflamed with regular border; **Floor**: covered with slough and unhealthy granulation tissue; **Base**: indurated; **Discharge**: foul smelling pus discharge; **Surroundings**: blackish in color with bleeding, tenderness and non-palpable regional lymph nodes.

TREATMENT: The ulcers were cleaned daily with normal saline, and dressing was done with *Thumari* oil. 2 tab *Triphala Guggulu* (500mg) tds was given orally.

RESULT: On the 3rd day, local tenderness was reduced. After a week of treatment ulcer margins showed sign of healing. Gradually ulcer margins started healing but terminal phalanxes were auto debrided. Plantar side area became exposed after auto amputation, and remaining exposed tendon were excised.

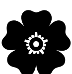
Ulcer was completely healed within 10 week of regular dressing with *Thumari* oil along with normal pigmentation of healed area.

CONCLUSION: This single case study showed encouraging result of *Thumari* oil potential to heal the gangrenous diabetic ulcer, and needs to be further evaluated for validation.

1st Day	7th Day	After 6th Week	After 10th Week

13. Ghodela NK, Dudhamal TS. Clinical efficacy of *Thumari* oil (*Securinega leucopyrus*) in the management of Diabetic Foot Ulcer.-A case Report. 2017; Journal of Ayurveda 11(1): 100-103. [ISSN:2321-0435]

https://www.researchgate.net/profile/Tukaram-Dudhamal/publication/322720891_Clinical_efficacy_of_Thumari_oil_Securinega_leucopyrus_in_the_management_of_Diabetic_Foot_Ulcer-A_case_Report/links/5a6b1d38a6fdcc2aedee739f/Clinical-efficacy-of-Thumari-oil-Securinega-leucopyrus-in-the-management-of-Diabetic-Foot-Ulcer-A-case-Report.pdf



Clinical efficacy of Thumari gel (Securinega leucopyrus [Willd.] Muell) in the management of superficial non-healing leg ulcers- A rare case report[14]

CASE DESCRIPTION: A 45 year male patient, had complaints of painful, hypertrophied, irregular shaped oozing ulcers over the anterior aspect of tibia since 3 months, gradually developed after tibia fracture (6 months ago), which was earlier managed with external fixation. Patient was unable to bear weight on his affected lower limb. There was no previous history of HTN and DM. According to patient history superficial ulceration were progressively developed after the successful management of tibial fracture with MIPPO technique. Patient was advised to complete bed rest till recovery. During that period he observed that small ulceration were developing on anterior aspect of tibia which were progressive in nature without healing after proper medications also. These ulcers didn't respond to modern medications, so patient opted for Ayurvedic interventions.

ON EXAMINATION: **Site**: on anterior aspect of tibia; **Number**: multiple; **Edge** & **margin**: irregular; **Floor**: hypergranulation tissue; **Base**: indurated; **Discharge**: sanguineous; **Surrounding skin**: normal pigmentation; **Tenderness**: present; **Regional Lymph node**: Not enlarged and non-palpable.

THERAPEUTIC INTERVENTION: Superficial ulcerations were cleaned daily with *Triphala Kashaya*. After cleaning of ulcer, topically *Thumari* Gel was applied & covered with sterile gauze pieces and bandaged daily once in the morning.

RESULT: After 1st week, ulcer margins showed normal epithelialization with reduced discharge. After 2nd week, ulcers size reduced remarkably. During this treatment ulcer showed progressive healing. After 3rd, 4th and 5th week, ulcer size was remarkably reduced with normal contraction of ulcer margins.

CONCLUSION: Regular cleaning with *Triphala Kashaya* and dressing (local application) of *Thumari* gel have shown remarkable healing effects in non-healing chronic leg ulcers. The gel formulation is safe, easy to apply and tolerable to the patient without any side effect. This formulation need to be tried in more number of cases for further evaluation.

1st Day	After 2nd week	After 3rd week	After 6th week

14. Ghodela NK, Dudhamal TS. Clinical efficacy of *Thumari* gel (*Securinega leucopyrus* [Willd.] Muell) in the management of superficial non-healing leg ulcers- A rare case report Int. J. AYUSH CaRe. 2017;1(1):1-5. [ISSN: e 2457-0443]. www.ijacare.in

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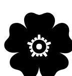


Jalaukavacharana (leech application) and adjuvant therapy in the management of infected wound[15]

CASE DESCRIPTION: A 45 year old male auto driver of *Vata Kaphaja Prakriti* had complaints of severe pain, swelling with ulceration over the dorsum of right foot and intermittent fever for the past two weeks. History revealed an unknown insect bite during sleep. Burning pain was noticed immediately after the bite that was increased gradually. On 2nd day, affected foot was swollen with symptoms of cellulitis. Patient had taken antibiotics, analgesics and anti-allergic drugs for ten days from a private hospital without any relief of symptoms rather the severity of pain & size of ulcerative lesion was increased. Routined laboratory investigations were found to be normal except slight variation in percentage of neutrophil and lymphocyte count.

ON EXAMINATION: A progressive ulcer in the dorsum of left foot just above the metatarsophalangeal joint, about 5x7 cm in size, with irregular, inflamed margins was found. Floor was covered with necrotic tissue with foul odour and purulent discharge. On palpation, local temperature was raised and the surrounding area was tender (+++). Distal neurovascular status was normal. Radiological examination of foot revealed no bony abnormality.

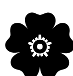
THERAPEUTIC INTERVENTION: Necrotic tissue was removed surgically and surrounding skin of the ulcer was cleaned with *Panchavalkala Kwatha. Jalaukas* were applied over the floor and at the border of the ulcer. *Jalaukaavacharana* was started with four *Jalauka* on first day and three *Jalauka* on 3rd and 5th day of admission. This was followed by cleaning of the area with *Panchavalkala Kwatha* and dressing with paste of *Katupila* and *Tila taila* regularly till complete healing. All the *Jalaukas* used on 1st day died after 15 minutes of blood-letting, while *Jalaukas* used on 3rd and 5th day died after an hour.

RESULT: Swelling and pain were reduced remarkably on 5th day of leech application. On 15th day of regular dressing; necrotic tissue disappeared completely and wound became clean with exposed tendons. After 30 days, healthy granulation tissue was observed and exposed tendons were covered with healthy granulation tissue. Gradually, the ulcer size was reduced with remarkable wound contraction. After 45 days, the wound became small and wound was healed completely by the end of two months without any internal medication.

CONCLUSION: *Jalaukavacharana* along with local application of paste of *Katupila* mixed with *Tila Taila* is an effective and safe treatment modality for the management of *Dusta vrana* caused by insect bite. This modality may even be beneficial in other types of infective and non-healing ulcers.

Wound covered with necrotic tissue with Inflamed margins	Application of leeches	On 56th day

15. Foram Joshi, Mahanta VD. Dudhamal TS, Gupta SK, *Jalaukavacharan* (Leech application) and adjuvant therapy in Management of infecxted wound - A Case Report. Journal of Ayurveda Case Reports (Ayu CaRe) 2017;1 (1): 13-17.
https://www.researchgate.net/publication/322721677_Jalaukavacharana_Leech_application_and_adjuvant_therapy_in_the_management_of_infected_wound



Management of bed sores with Thumari gel [Securinega leucopyrus (Willd.) Muell.] - an extra-pharmacopeal drug-a case study[16]

CASE DESCRIPTION: A 42 year old male patient had history of hemiparesis (due to spinal injury) since four years, with bedsores on both sides of greater trochanters. Patient had not reported history of diabetes mellitus (DM). Patient was under modern medication for wound management, but ulcers showed no sign of healing.

ON EXAMINATION: During general physical examination, vitals were reported within normal limits. On neurological examination: tendon reflex of ankle, and motor functions of lower limb were diminished. Patient was unable to stand or walk without support. During local examination of ulcer, 3cm x3cm sized bed sores were noted associated with blackish discoloration, mild serous discharge, irregular margins, hyper granulation, and minimal sensations. Hence, it was categorized under Grade II bed sores.

THERAPEUTIC INTERVENTION: Bed sore were cleaned daily with normal saline. After cleaning of ulcer, topically *Thumari* gel was applied and covered with sterile gauze pieces, and bandaged daily once in the morning hours.

RESULT: On the 1st day, mild serous discharge was present. On both lateral aspect ulcers were also presented with mild serous discharge, numbness, and macerated peripheral skin around ulcer. During 1st week and 2nd weeks, right and left sided ulcer showed healthy granulation tissue and collagen deposition with results in ulcer contraction. In 2nd week; on measurement ulcer size was reduced to 2.2cm x2.3 cm (right), 2.0cm x2.1cm (left) sides respectively. In 3rd week, left sided ulcer was approximately healed and on right sided the size was reduced to 1.5cm x1.3 cm. In 4th week, left sided ulcer was complete healed with surrounding minimal pigmentation and on right side ulcer was 0.8cm x0.9 cm sized. In 6th week right sided ulcers were also healed completely. Both side ulcers were healed with healthy tissue strengthening, minimal scar and normal surrounding pigmentation. The case was followed up after six months, to assess the recurrence, and it was noted that the scar was normal without recurrence.

CONCLUSION: *Thumari* gel has tremendous healing properties which help in healing of bedsores with normalizing the discoloration of skin.

Left Sided	Right Sided	Left Sided	Right Sided
On 1st Day	On 1st Day	After 4 months	After 4 months

16. Ghodela NK, Dudhamal TS. Management of Bed Sores with Thumari Gel [*Securinega leucopyrus* (Willd.) Muell.]-An Extra-pharmacopeal Drug- A Case Study Int. J AYUSH CaRe. 2018; 2(1):20-25. [ISSN: e 2457-0443]. www.ijacare.in
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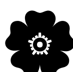


Clinical effect of Kasisadi Taila in the management of post-operative wound of infected sebaceous cyst-a case report[17]

CASE DESCRIPTION: A female patient of 50 years had complaints of swelling at right gluteal region for 7 months. The swelling increased in size gradually. One month ago, she noticed whitish thick discharge with foul smelling coming from wound. Patient also felt pain in the right gluteal region for 1 week with pricking type pain referring to left leg. She also reported history of excision of sebaceous cyst twice in an interval of one year in civil hospital.

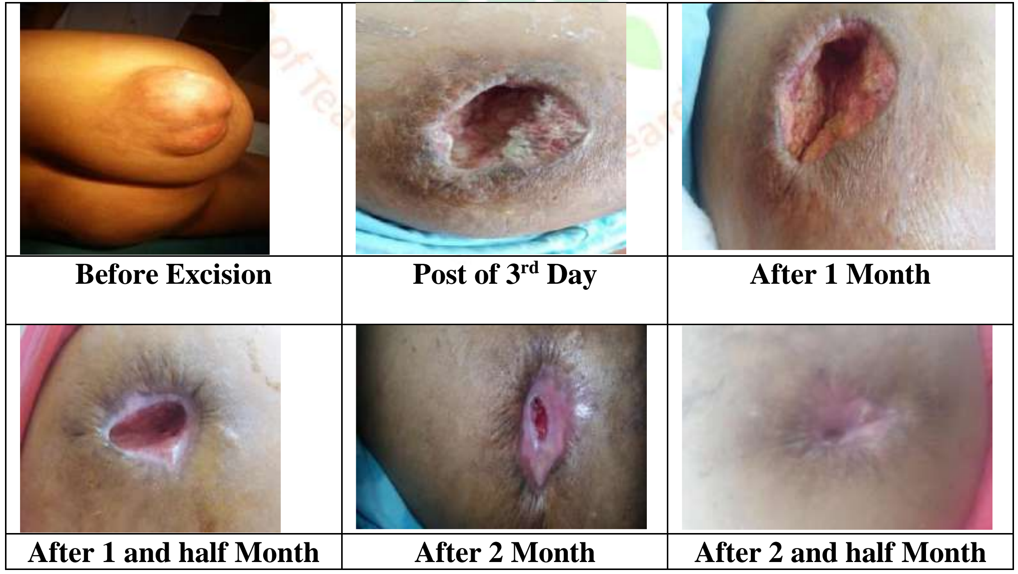
ON EXAMINATION: A big spherical non-movable swelling at right upper quadrant of gluteal region, approximately the size of 8cm x 7 cm, with tenderness was found. It was provisionally diagnosed as infected sebaceous cyst. Ultrasound report confirmed the case to be so.

INVESTIGATION: Hematological and biochemical values were found within normal limit. All systemic examinations & vital data were within normal limit having BP 126/80mm of Hg.

THERAPEUTIC INTERVENTION: Under spinal anesthesia, with all aseptic precaution, cyst was excised. The post-surgical wound was not closed as the cyst was infected and was of big size. As the case had history of recurrence for two times instead of conventional dressing with antiseptic *Kasisadi Taila* was applied locally in routine dressing to promote secondary healing.

RESULT: The wound healed completely with normal scar after two months.

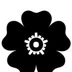
CONCLUSION: *Kasisadi* oil possesses *Shodhan* (Cleaning), *Lekhan* (Scraping/debride), *Ropan* (healing) properties, and has potential to heal post-operative wound of infected sebaceous cyst. This study needs further validation by conducting it as controlled trials.



Before Excision | Post of 3rd Day | After 1 Month

After 1 and half Month | After 2 Month | After 2 and half Month

17. Nakarani H, Dudhamal TS. Clinical effect of Kasisadi Taila in the management of post-operative wound of infected sebaceous cyst – a case report International journal of medicinal plants and Natural Products (IJMPNP). 2018; 4(1): 22-25. [ISSN: 2454-7999] www.arcjournals.org https://www.arcjournals.org/international-journal-of-medicinal-plants-and-natural-products/volume-4-issue-1/5



Effect of honey with Haridra (Curcuma longa) ointment in the management of burn wound in diabetic patient-a case report[18]

CASE DESCRIPTION: A case of 50 year old male patient had complaints of burn wound at dorsal surface of both feet for last two days associated with discharge and mild swelling around the wound. Patient was taking oral hypoglycemic medications: tab. Glipizial 5 mg OD & tab. Metformin 500 mg OD. He was also taking treatment for *Sandhigata Vata* & during *Swedana*/sudation process by hot water bags (for 30 minutes), and due to diabetic neuropathy he was unable to sense, and plantar surface of both feet got burnt. Due to negligence in wound care it got infected after sometime & led to pus discharge along with foul smell.

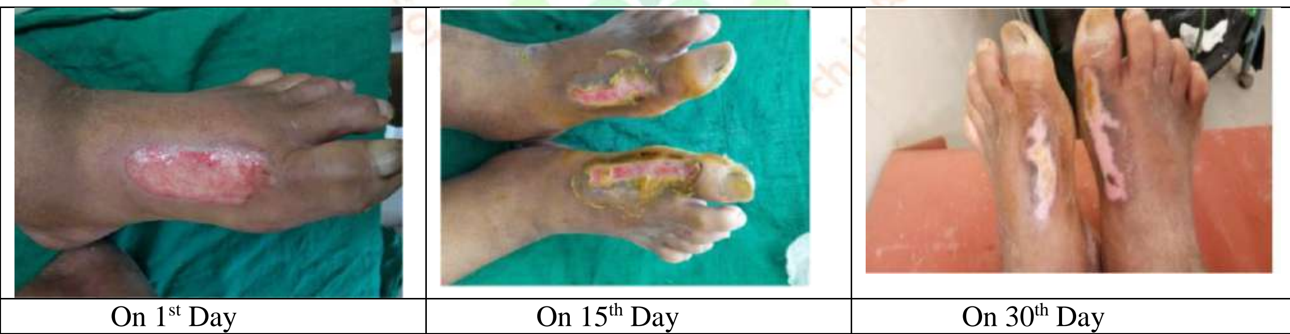
ON EXAMINATION: A square shape infected ulcer at plantar surface of both feet was found of size 6.2 cm x 3.4 cm x 2 mm in right foot & 4.2 cm x 3.2 cm x 2 mm in left foot, with mild inflamed margins. Local examination reveals the symptoms of second degree superficial heat burn.

INVESTIGATION: The routine blood investigations were done, & in that hemoglobin was 8.5% & RBS was 225mg/dl, and in urine examination sugar was ++. The X-ray of both feet was found to be normal without any bony involvement or osteomyelitis. All systemic examinations were within normal limit having BP 130/86 mm of Hg.

THERAPEUTIC INTERVENTION: The wound was first cleaned with normal saline then applied with honey & *Haridra* ointment in sufficient quantity. The wound was then covered with sterile gauze piece and bandaged. This procedure was followed daily once in the morning for four weeks.

RESULT: The wound was healed completely within 4 weeks with white scar formation and normal skin coloration.

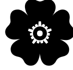
CONCLUSION: Honey & *Haridra* possesses *Shodhan* (cleaning), *Ropan* (healing) and *Varnya* (depigmentation) properties, and had potential to heal the burn wound in diabetic patients with peripheral neuropathy. This single case study showed encouraging result in burn wound and needed further scientific validation in larger samples.



On 1st Day	On 15th Day	On 30th Day

18. Patel ED, Shah B, Dudhamal TS. Effect of Honey with Haridra (*Curcuma longa*) ointment in the management of burn wound in diabetic patient – A case report International Journal of Scientific Research (IJSR). 2018;7(6): 12-13 [ISSN:2277 – 8179]. www.worldwidejournals.com

https://www.researchgate.net/publication/325533523_EFFECT_OF_HONEY_WITH_HARIDRA_CURCUMA_LONGA_OINTMENT_IN_THE_MANAGEMENT_OF_BURN_WOUND_IN_DIABETIC_PATIENT-A_CASE_REPORT



Wound healing activity of Thumari oil (Securinega leucopyrus) in the management of Stanagatvrana (breast wound)-a single case study[19]

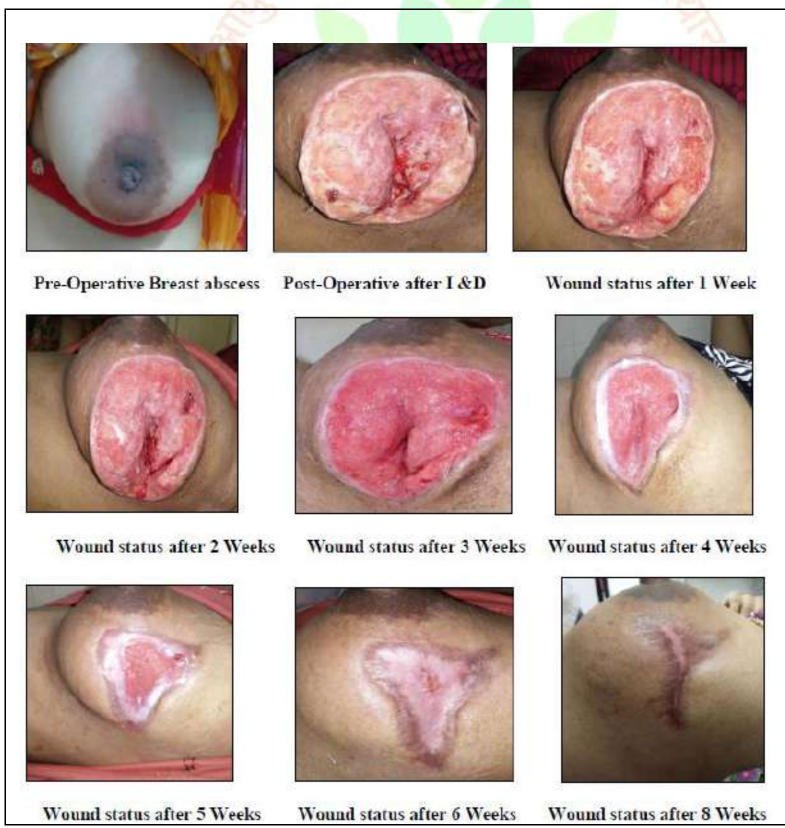
CASE DESCRIPTION: A 21 year old lactating female patient had complaints of pain in left breast with a hard swelling, feeling of burning and redness for last 5 days. Pain was so severe that the patient was unable to move her hand also. Recurrent fever was also present.

ON EXAMINATION: There was redness, tenderness, hard swelling and local temperature increased in left breast (Fig-1). She was clinically diagnosed to have left breast abscess.

THERAPEUTIC INTERVENTION: Under short GA incision, drainage and debridement of necrosed tissue was done after admitted in IPD female ward. A big post-operative wound (13cm x 12cm x 6cm) was created due to excision of large involved breast tissue. Wound was painful (VAS-6), pus discharge present with unhealthy tissue. Local conventional dressing was done with antiseptic along with antibiotics and analgesic without any response. Wound was cleaned with normal saline and dressing with *Thumari* oil was done once a day for 2 months.

RESULT: Wound was healed completely after 2 months with very minimal scar.

CONCLUSION: *Thumari* oil (*Securinega leucopyrus*) possesses *Shodhan*, *Ropan*, *Lekhan* and *Savarnikaran* properties, and had potential to heal big post-operative non-healing wounds.



19. Solanki R, Dudhamal TS. Wound healing activity of *Thumari* oil (*Securinega leucopyrus*) in the management of *Stanagatvrana* (Breast wound) – A single case study. International Journal of AYUSH Case Reports. 2018; 2(3): 32-36. [ISSN: e-2457-0443]. www.ijacare.in
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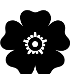


Role of Humari oil (extra pharmacopoeial drug) in the management of non-healing post fistulectomy wound-a single case report[20]

CASE DESCRIPTION: A 56 year old male patient had complaints of pus discharge from anal region. He was operated for fistula-in-ano (partial fistulectomy with *Ksharasutra*) twice earlier. No history of any other medical or surgical illness reported by patient.

ON EXAMINATION: Patient had a *Ksharasutra*-in-situ and a post fistulectomy wound (6x4 cm) at 6 o'clock with pus discharge. On probing a tract was found in the wound at 6 o'clock.

INVESTIGATION: All the hematological and biochemical investigations were within normal limit.

THERAPEUTIC INTERVENTION: Then under spinal anesthesia both the tracts were layed open (fistulotomy) and margins were trimmed. After that wound measurement was 8cmx5cmx3cm.

METHOD OF DRESSING: First sitz bath was advised in *Panchvalkal* decoction in ARC (Ano rectal Clinic) and then it was cleaned with normal saline. The cotton gauze soaked in *Humari* oil was applied on the wound and T bandage was applied. This procedure was followed daily until wound healing, i.e. for 8 weeks.

RESULT: Wound healed completely after 8th weeks of treatment.

CONCLUSION: *Hhumari* oil is a promising option for the treatment of non-healing wounds at and around anal region.

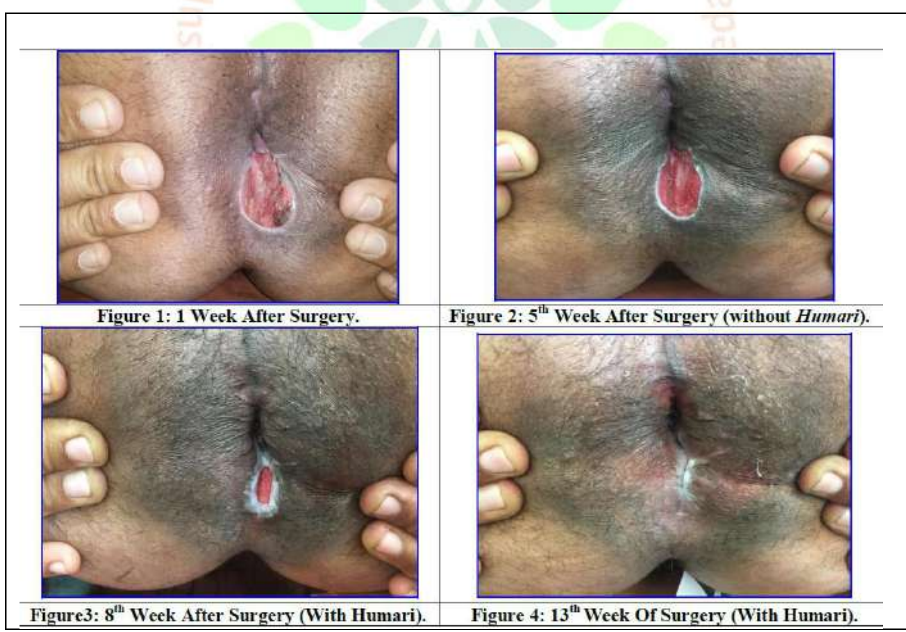


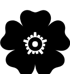
Figure 1: 1 Week After Surgery.

Figure 2: 5th Week After Surgery (without *Humari*).

Figure3: 8th Week After Surgery (With Humari).

Figure 4: 13th Week Of Surgery (With Humari).

20. Shreshtha M, Dudhamal TS. Role of Humari oil (extra pharmacopoeial drug) in the management of non-healing post fistulectomy wound- a single case report European Journal of Biomedical and Pharmaceutical sciences. 2018;5(11):437-439. [ISSN -2349-8870] http://www.ejbps.com
https://www.researchgate.net/publication/360620613_ROLE_OF_HUMARI_OIL_EXTRA_PHARMACOPOEIAL_DRUG_IN_THE_MANAGEMENT_OF_NON-HEALING_POST_FISTULECTOMY_WOUND-A_SINGLE_CASE_REPORT



Varicose ulcer management with topical application of Katupilla paste (Securinega leucopyrus): a single case study[21]

CASE DESCRIPTION: A male patient of age 73 years had complaints of large ulcer at medial malleolus of right foot, severe throbbing pain, watery discharge & swelling of right foot. On history patient revealed to have severe cellulitis in right foot which opened spontaneously leading to a large superficial wound at medial malleolus one month back. He had taken treatment from a local doctor without any relief, so he consulted to the Ayurved hospital.
In the past, patient had a similar history of severe cellulitis of right lower leg, so pus drainage and then skin grafting was done at Shrikishna mission hospital Haridwar in 1999. He had history of ligation of varicose veins of left lower leg in 2000 at the same hospital. He had no history of cardiac diseases, diabetic mellitus, tuberculosis, venereal diseases, bronchial asthma, anemia or any other major illness. Patient did not have any kind of addiction.

ON EXAMINATION: Wound at medial malleolus of size 12cm x 10cm, swelling at surrounding area, discharge and slough. Prominent varicosity at medial side of both lower limbs was observed.

INVESTIGATION: Routine blood investigation for complete blood count (CBC), blood sugar level and serum creatinine were normal except increased white blood corpuscles (WBC) and neutrophils. The pus culture report was negative for micro-organism both gram positive and gram negative, and for fungal also. X-ray of affected foot revealed no bony involvement except local soft tissue odema.

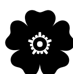
THERAPEUTIC INTERVENTION: Wound cleaned with normal saline and S. leucopyus leaves powder mixed with sesame oil was applied on wound. As wound was big the leaves powder 15 gm and sesame oil 10 ml was required in initial days. The symptoms like pain, swelling and discharge were markedly reduced and wound became clean with mild slough after 7 days. Treatment continued daily and wound base became clean due to increased circulation and neo-vascularization after 15 days. Day by day wound size reduced due to wound contraction and epithelisation which remained half of the size (approx. 6cm x 5cm) after one month. Along with wound contraction the healed scar changes to normal skin colour and reduced in size which at last became one fourth of its initial size.

RESULT: The patient was treated for two months up to complete wound healing.

CONCLUSION: The paste of *Securinega leucopyrus* mixed with sesame oil showed healing potential in varicose ulcer and further research is needed in more cases of non-healing ulcers for its validation.

Large varicose ulcer	After 7 days	After 15 days	Healed within 2 months

21. Dudhamal TS. Wound healing activity of *Securinega leucopyrus* (Herbal paste) in Varicose Ulcer- A Case Study. Indian Journal of Ancient Medicine and Yoga [IJAMY]. 2018;11(3): 69-72.[pISSN 0974-6986, eISSN 0974-6994). www.rfppl.com
https://www.researchgate.net/publication/329185799_Varicose_Ulcer_Management_with_Topical_Application_of_Katupilla_paste_Securinega_leucopyrus_A_Single_Case_Study



Management of multiple varicose ulcers with leech application-a case report[22]

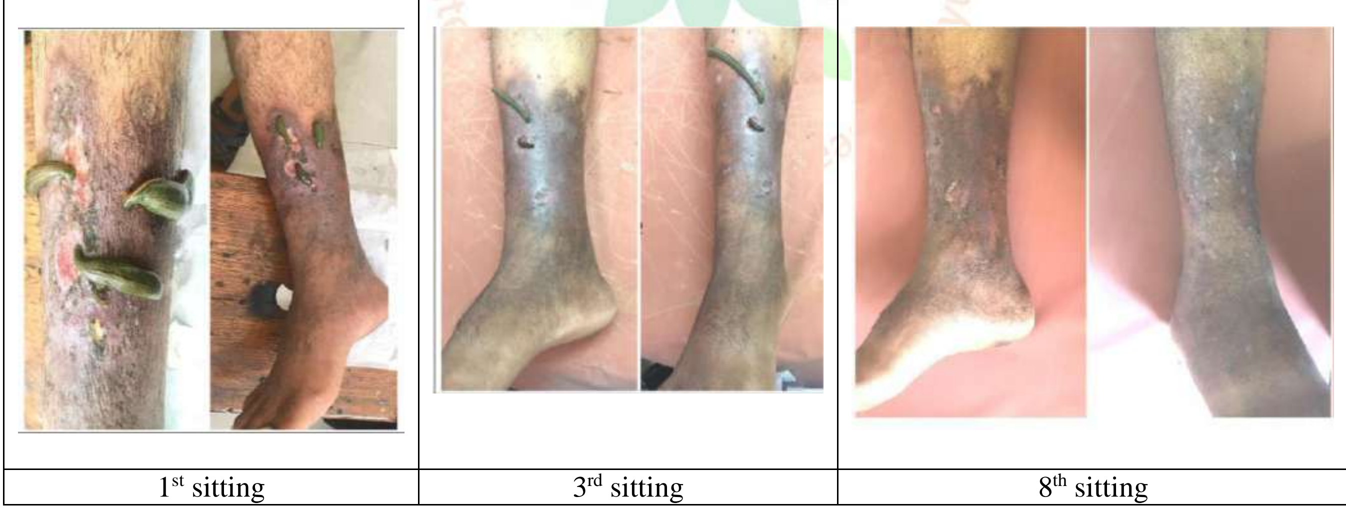
CASE DESCRIPTION: A 30 year old male patient had complains of dull aching pain in both the lower limbs and swelling since last 5 years, later on discoloration developed (since last 1.5 years), and ulcers developed since 4 months. As the patient was a cook by profession, he had to stand all day approximately 10-12 hours since last 17 years leading to the varicose vein & ulcers.

ON EXAMINATION: Multiple ulcers with serous discharge, mainly on the shin area of right lower limb and signs of inflammation were noted. Discharges could be seen oozing out from the skin. Bluish black discoloration was present, and eczematous changes were evident. Tortuous veins could be seen. Tourniquet test was positive.

INVESTIGATION: Colour Doppler study of right lower limb veins showed incompetence of sapheno-femoral junction. Main valve and all segmental valves of great saphenous vein appeared incompetent. Two incompetent perforators were seen on medial aspect of junction of middle and lower one third of leg region. An incompetent perforator seen on medial aspect of junction of upper and middle third of leg. An incompetent perforator was seen in upper calf region. Multiple varicosities seen on medial aspect of thigh, leg, around ankle and on dorsal aspect of foot in GSV territory. Few of the varicosities were communicating with short saphenous vein. GSV appear dilated, measuring 9 to 10 mm. SSV appeared dilated measuring 4.8 mm.

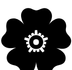
THERAPEUTIC INTERVENTION: Leach application was done up to 2 months (8 sittings), once every week. 2-4 leeches were applied at a time.

RESULT: On 8th visit, there were no signs of inflammation, skin was dry and no eczematous lesions were observed.



1st sitting	3rd sitting	8th sitting

22. Shrestha M, Dudhamal TS. Management of multiple Varicose ulcers with leech application- A Case Report. International Journal of AYUSH Case Reports.2018; *2*(4): 26-34. [ISSN: e-2457-0443]. www.ijacare.in https://www.ijacare.in/index.php/ijacare/article/view/61



Management of Agantuja Vrana (chemical burn wound) with Jatyadi Ghrita and Panchvalkal Kashaya-a case report[23]

CASE DESCRIPTION: A 46 years old male married laborer with the habit of bidi smoking had complaints of severe pain in ano with wound at peri anal region having foul smelling pus discharge, difficulty in sitting and passing stool with low grade fever since 1 week. He had taken treatment from a traditional medical practitioner for *Arsha* before 12 days. He applied some powder of unknown nature at the peri anal region. A burn wound was formed after 5 days of application. Patient was unable to pass stool owing to severe pain since last 5 days.

ON EXAMINATION: On per rectal examination, an infected wound was noticed at peri anal region which was circular in shape, measuring about 12X10 cm, & covered with slough. Apart from that foul smell, copious pus discharge and blackish peripheral margin were noted showing the level of infection. Severe pain and tenderness was noted at and around the wound. Local temperature was little bit elevated in comparison to peripheral area.

INVESTIGATION: All vitals were within normal limit. Blood investigations were unremarkable except increased total leucocyte count (11,200/mm^3) and neutrophil count (74%).

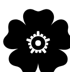
THERAPEUTIC INTERVENTION: Tab. Cefixime 200mg + Ordinazole 500mg given two times a day for 5 days to control infection. *Avagaha Swedan* was given with freshly prepared *Panchvalkala Kashaya* two times a day. *Vrana Prakshalana* was done with *Panchvalkala Kashaya* and sterile dressing was done with *Jatyadi Grita* and finally a "T" bandage was applied. After 7 days of regular dressing, anal dilatation was started with *Jatyadi Ghrita* with 6 number anal dilator, once daily before dressing. Along with dressing, following drugs were prescribed: tab. *Triphala Guggulu* (500mg) 2 tab three times a day with lukewarm water, *Eranda Bhrushta Haritaki* powder 5gms once at bed time with lukewarm water and a combination of *Avipattikar Churna* 5 gm, *Shankha Bhasma* 500 mg, *Sutashekhara Rasa* 125 mg 30 minutes before meal with plain water twice a day.

RESULT: After 8 weeks of treatment a natural and healthy scar was observed in the place of the wound.

CONCLUSION: Sitz bath with *Panchwalkal Kashaya* and topical application of *Jatyadi Grita* has shown promising results on healing of *Dushta Vrana*. This regimen may be recommended for the management of infected and non-healing wounds in day-to-day practice.

Burn wound 1st day	Wound status on 7th day	Wound status on 56th day

23. Joshi FP, Mahanta VD, Gupta SK, Dudhamal TS; Management of Agantuja Vrana (Chemical Burn Wound) With Jatyadi Ghrita and Panchvalkal Kashaya-A case report; J Res Educ Indian Med, 2015 (21)3-4:131-36 [ISSN 0970-7700]
https://www.researchgate.net/publication/321773277_MANAGEMENT_OF_AGANTUJA_VRANA_CHEMICAL_BURN_WOUND_WITH_JATYADI_GHRIT_AND_PANCHVALKAL_KASHAYA-A_CASE_REPORT



Efficacy of Panchvalkaladi oil in the management of post-operative wound of breast abscess: a single case study[24]

CASE DESCRIPTION: A 24 year old female patient had complaints of non-healing wound of 6.8×5.1×5.3cm^3 size in the lower quadrate of right breast associated with tenderness, sloughing, and inflamed edges since last 20 days. She had a history of breast abscess and had under gone Incision & Drainage procedure before 20 days. Antibiotic, antacid and analgesic were taken for 10 days as prescribed by the surgeon. After that, there was no improvement in healing of wound.

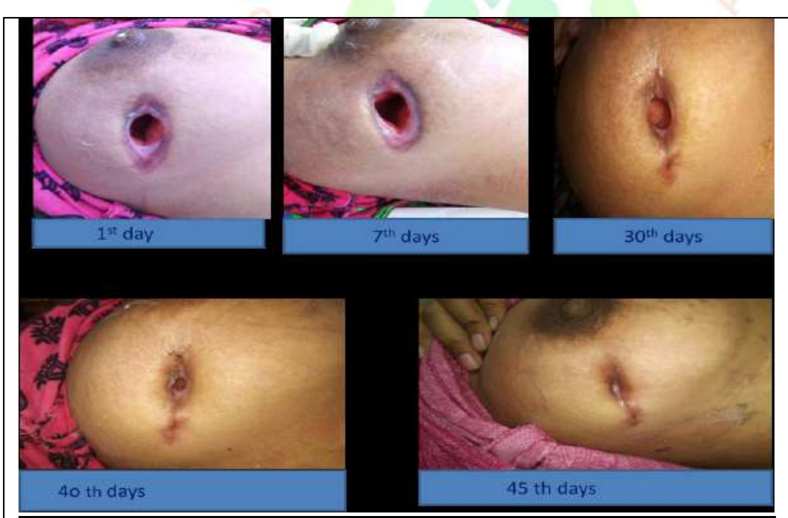
ON EXAMINATION: A wound site in the lower quadrate of right breast. On inspection: edge and margin was irregular, floor was covered with slough, base was indurated and surrounding skin was inflamed & reddish. On palpation: regional lymph node was not enlarged but palpable and tenderness was also present. Wound has a foul odor.

INVESTIGATION: All routine investigation were done and found under normal limit (Hb was 10.8 %, FBS was 98mg/dl and PPBS was 120mg/dl).

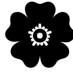
THERAPEUTIC INTERVENTION: Patient was treated with local application of *Panchvalkaladi* oil daily and observed for improvement at regular intervals. The wound was cleaned with normal saline and surrounding area with betadine solution, and *Panchvalkaladi* oil was applied on wound in sufficient quantity then wound was covered with sterile gauze and bandaged with micropore. Tablet *Mahrashi Amrita Kalash* BD for 30 days alongwith *Mahrashi Amrita Kalash Avaleha* 50 gm at morning with warm water was taken for 30 days.

RESULT: After 45 days of *Panchvalkaladi* oil dressing wound was completely healed.

CONCLUSION: *Panchvalkaladi* oil has potential in the management of big size wound. This study needs to be explored in larger samples to provide better treatment options for non-healing wounds.



24. Gamit N, Dudhamal TS. Efficacy of Panchvalkaladi Oil in the Management of Post-Operative Wound of Breast Abscess: A Single Case Study. J Nat Ayurvedic Med 2019, 3(1): 1-4. [ISSN: e-2578-4986]. https://medwinpublishers.com/JONAM/ Impact Factor Or Status1.5723
https://www.researchgate.net/publication/333423055_Efficacy_of_Panchvalkaladi_Oil_in_the_Management_of_PostOperative_Wound_of_Breast_Abscess_A_Single_Case_Study



Efficacy of *Thumari Malahara* in the management of Dushta Vrana (chronic non-healing wound): a single case report[25]

CASE DESCRIPTION: A 62 years old male patient had complaints of non-healing ulcer in left foot with pus discharge in an off & on manner, difficulty in walking since last 5 years. Patient had a history of insect bite 5 years back, after that the abscess was developed which lead to ulceration & became chronic with gradual increase in size. The ulcer was previously treated by a general practitioner, as there were no remarkable results the surgeon advised to go for skin grafting. So the patient underwent skin grafting twice (1 year and 3 years back), but both the time the process failed.

ON EXAMINATION: On examination, 5×9×4.5 cm sized infected ulcer at lateral malleolus of left foot with slough, foul odor, pus discharge, tenderness, slopping edges, hyper pigmented surrounding area was found. Muscle wasting was also present at left lower limb due to old age.

INVESTIGATION: Laboratory investigations for total leukocyte count, differential leukocyte count, hemoglobin was in the normal range while blood urea and serum creatinine were at borderline

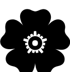
THERAPEUTIC INTERVENTION: Patient was treated with local application of *Thumari Malahara* daily and observed for improvement at regular intervals. The wound was cleaned with normal saline and *Thumari Malahara* was applied in adequate quantity. Changes in symptoms like tenderness, color, inflammation, slough, discharge, size of wound was observed daily.

RESULT: After 7th day of application of *Thumari Malahara,* the wound was free from pus discharge, swelling and tenderness. On 15th day, there was fresh granulation tissue with contracting margins observed as a sign of wound healing. Filling of the wound base with fresh and well-vasculated tissues was formed with decreased wound size. On 21st day, wound was half of its previous size. After 30 days of treatment, wound was completely healed with white scars.

CONCLUSION: *Thumari Malahara* has potential in the management of chronic non-healing ulcer even in patients of the old age. This observation needs to be further evaluated to explore better options for the management of chronic non-healing ulcers.

Wound status on 1st day	**Healthy wound on 15th day**	**Healed wound on 30th day**

25. Kapadiya M. Dudhamal TS. Efficacy of Thumari Malahara in the Management of Dushta Vrana (Chronic Non-Healing wound): A Single Case Report. Indian Journal of Ancient Medicine and Yoga. 2019; 12(1):21-25. [pISSN 0974- 6986, eISSN 0974 - 6994). www.rfppl.com
https://www.researchgate.net/publication/360621735_Efficacy_of_Thumari_Malahara_in_The_Management_of_Dushta_Vrana_Chronic_Non-Healing_wound_A_Single_Case_Report



Applicability of Thumari (Securinega leucopyrus [Willd.] Muell.) gel and oral adjuvant drugs in the management of infected diabetic wound[26]

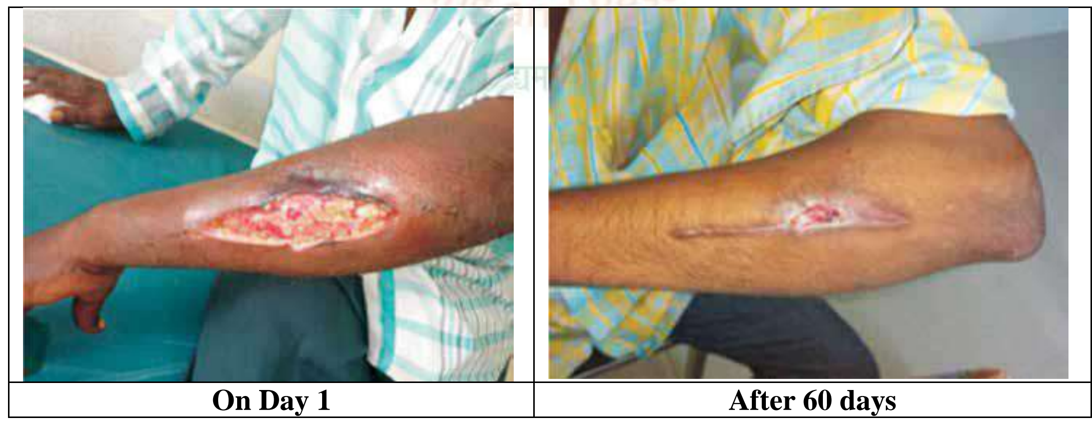
CASE DESCRIPTION: A 45 year old male diabetic patient approached for the treatment of wound on lateral aspect of left forearm. The patient had an injury some time back that was not managed systematically. A week back, an abscess developed in the vicinity of the wound that was drained by a surgeon, who further suggested skin grafting after controlling infection. Considering financial constraints, patient didn't follow the advice and discontinued the suggested treatment protocol. Although wound dressing was being continued wound remained unhealed.

ON EXAMINATION: A wound, exposing extensor fascia, measured about 15 cm x 6 cm in size associated with necrotized tissue, swelling, slough, and purulent discharge was observed. On palpation, raised local temperature with tenderness observed.

THERAPEUTIC INTERVENTION: Freshly prepared decoction of *Triphala* was used to clean the wound, followed by dressing with application of *Thumari* gel over the wound. Improvement in symptoms was noted on weekly intervals. *Triphala Guggulu* (1 gm thrice a day) and *Manjisthadi Kashaya* (50 ml once daily) were given after meal for six weeks. During the course of treatment, the patient was also using Glipizide (5 mg) and Metformin (500 mg) for the management of diabetes and was under the consultation of general physician.

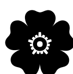
OBSERVATIONS & RESULT: On 3rd day, surgical debridement of necrotized tissue was done. During initial days, patient was advised to elevate his limb using arm sling. Discharge, tenderness and swelling were reduced and healthy granulation tissue were noticed in the affected area within a week of management. Initial wound contraction was progressed over incised area (made for abscess drainage by the surgeon). Wound approximated within two months with normal skin pigmentation.

CONCLUSION: Application of *Thumari* gel is safe and efficacious in management of infected diabetic wound. The gel form was found to be convenient to apply over such infected wounds. No irritation was reported and patient was comfortable with its application. Clinical trials involving larger sample size are needed to evaluate actual efficacy of the trial drug for the management of diabetic wound.



On Day 1	After 60 days

26. Ghodela NK, Dudhamal TS, Gupta SK, Mahanta VD. Applicability of Thumari (Securinega leucopyrus [Willd.] Muell.) Gel and Oral Adjuvant Drugs in the Management of Infected Diabetic Wound. Journal of Ayurveda Case Report 2019; 2(1):35-38.
https://www.researchgate.net/publication/360621670_Applicability_of_Thumari_Securinega_leucopyrus_Willd_Muell_Gel_and_Oral_Adjuvant_Drugs_in_the_Management_of_Infected_Diabetic_Wound



Integrative management of post-operative osteomyelitis wound in diabetes mellitus patient: a case report[27]

CASE DESCRIPTION: A 70 year old female with type 2 diabetes mellitus since last 3 years had complaint of non-healing ulcer in left lower arm posterior surface since 3 months along with localized pain and seropurulent discharge. Patient had history of sharp trauma and fracture of lower part of left humorous in a road traffic accident before 6 months. For that she has undergone surgical management by internal fixation of surgical implant before 6 months, and immobilization with sling bandage and other supportive management. Patient also revealed history of irregular bowel habit, decreased appetite and heaviness of body within the same duration of time.

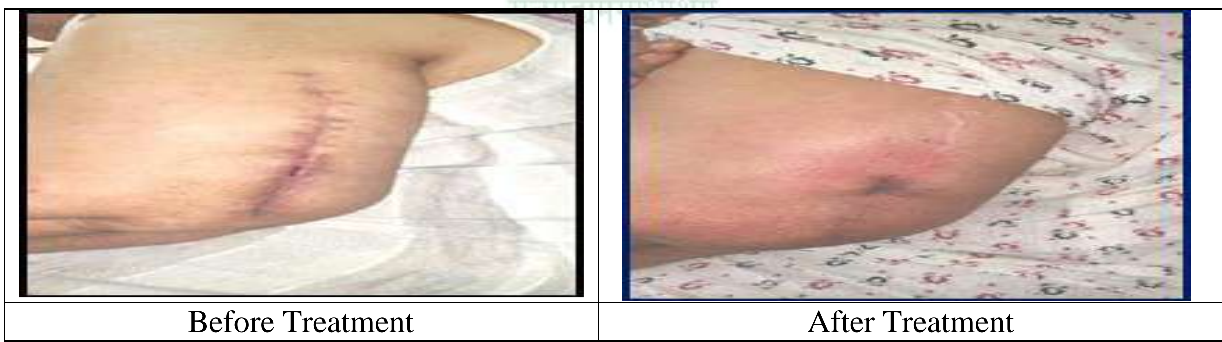
ON EXAMINATION: There were two different openings in the skin of lower 1/3rd of posterior part of arm along with seropurulent discharge. Inflamed wound margin and undermined edges were observed along with deep seated muscular base and infected wound flour due to slough. There was foul odour from wound and tenderness (++) was also noted in peripheral wound margin. Initial wound measurement was noted: 2.76 cmx0.92 cmx5.67 cm.

INVESTIGATION: All routine blood investigations were found within normal limits. Swab culture report on day first showed presence of Pseudomonas aerugenosa and E.coli in wound exudates. Same report on day 6th revealed presence of E.coli and absence of Pseudomonas aerugenosa in wound exudates.

THERAPEUTIC INTERVENTION: Case was managed with *Triphala Kwatha* for wound cleansing flush by syringe once per day prior to wound dressing. *Apamarga Kshara Taila Varti* dressing in both the open wound up to the deeper most extension of wound sinus was done. In oral medication, *Pippali Churna* 3gm with honey in empty stomach twice a day for initial 30 days, *Haritaki Churna* 6gm at bed time with luke warm water for 60 days, and *Sanjivani Vati* 1 tab (125 mg each) four times a day for initial 30 days were prescribed. Conventional oral medications, Cap. lincomycin 500mg twice a day and Cap. linozolid 600mg twice a day were continued for initial 11 days. Antidiabetic management of the patient was continued i.e., Cap. Metformine 500mg twice a day.

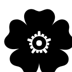
RESULT: The case was resolved in 63 days duration with complete osteomylitic wound healing.

CONCLUSION: With the help of multifactorial treatment the case was resolved in 63 days duration with complete osteomylitic wound healing, controlled blood sugar level and painless limb movements.



Before Treatment	After Treatment

27. Joshi F, Dudhamal TS. Integrative management of Post-operative Osteomyelitis wound in diabetes mellitus patient: A Case Report. International Journal of AYUSH Case Report. 2019; 3(4):285-289. [E-ISSN-2457-0443] http://www.ijacare.in https://www.researchgate.net/publication/338389427_INTERNATIONAL_JOURNAL_OF_AYUSH_CASE_REPORTS_IJA_CARE_Integrative_management_of_Post-operative_Osteomyelitis_wound_in_diabetes_mellitus_patient_A_Case_Report



Wound healing potential of three forms of *Panchavalkala* in post-operative fistula wounds - Case Series[28]

CASE DESCRIPTION: 8 patients of operated fistula-in-ano aged b/w 18-70 years having post-operative wound more than 2 cm were included in this study.

INVESTIGATION: All routine pre-operative investigations were carried out before the surgery of all patients.

THERAPEUTIC INTERVENTION: All 8 patients of post fistulectomy with *Ksharsutra* were treated locally by three formulations: *Panchavalkala* decoction used for Sitz bath twice a day or after defecation, *Panchavalkala* decoction (concentrated) used for cleaning the wound at the time of dressing & *Panchavalkala* ointment application on the wound.

RESULT: This drug has active desloughing and anti-inflammatory properties due to its *Kashaya Rasa* which has *Grahi* (to hold) and *Stambhana* (arresting) properties and helps in reducing the discharge and minimize swelling. The cleaning with concentrated *Panchavalkal* decoction has a role in desloughing, relieving pain and wound contraction.

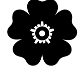
Observation of wound healing (n=8)

Sr. No	1st Day	7th Day	14th Day	21st day	28th day	After 1 month
Case-1	29.4 cm	24.8 cm	9.72cm	7.92cm	2.52cm	Healed
Case-2	8 o'clock-25.57cm 6o'clock-17.85cm	20.52cm 13.11cm	12.13cm 6.27cm	4.48cm 3.78cm	0.7cm 1.78cm	Healed
Case-3	33.6cm	27.6cm	16.3cm	6.68cm	2.78cm	0.06 cm
Case-4	18.72cm	13.23cm	7.56cm	3.12cm	0.35cm	Healed
Case-5	Rt side-71.4cm Lf side-86.64cm	47cm 51.3cm	11.8cm 27.1cm	8.52cm 8.64cm	2.6cm 6.3cm	Healed 0.09
Case-6	Rt side-6.48cm Lf side-9.19cm	Rt side-4.28cm Lf side-7cm	Rt side-1.84cm Lf side-4.59cm	Rt side-0.42cm Lf side-3.36 cm	Rt side - 0.18cm Lf side-1.58cm	Rt side - Healed Lf side-0.18 cm
Case-7	16.35 cm	11.22 cm	7.02cm	2.07cm	0.75cm	Healed
Case-8	7.9cm	7.1cm	2cm	o.2	0.1cm	Healed

CONCLUSION: On the basis of 8 patients case series study concluded that *Panchavalkala* in three forms is effective to control infection, and enhance wound healing process in the post-operative fistulectomy wounds without recurrence.

Pre-operative	POD 1st day	POD 14nd day	POD 28	Complete healed

28. Dhurve V, Dudhamal T. Wound healing potential of three forms Panchavalkala in post-operative fistula wounds- Case series. Int. J. AYUSH CaRe. 2020; 4(3): 189-197. [e-ISSN-2457-0443] http://www.ijacare.in https://www.researchgate.net/publication/360623259_INTERNATIONAL_JOURNAL_OF_AYUSH_CASE_REPORTS_IJA-CARE_Wound_healing_potential_of_three_forms_of_Panchavalkala_in_post-operative_fistula_wounds-Case_Series



Healing potential of Haridra-Madhu in fourth degree burn wound of paraplegic child: a single case study[29]

CASE DESCRIPTION: A 5 year old female child was referred by Kaumarbhritya department for treatment of burn as patient was under treatment for paraplegia. Patient reported history of fall on a hot iron plate causing burn on gluteal region of both sides. The wound was reddish, having black slough without any pain; and it was diagnosed as fourth degree burn.

In past history patient reported convulsions 5-6 episode/day in childhood. She had a history of surgery for meningomyelocele in the lumbar region under general anesthesia.

ON EXAMINATION: blackish wounds on bilateral gluteal region along with surgical scar marked were seen in lumbosacral area. The size of wound was 5.2 cm. x 4.8 cm (left gluteal) and 7.1 cm x 5 cm (right gluteal), with blackish surrounding area and elevated margins. The patient reported that both gluteal and lower leg didn't have sensation due to surgery but motor function of both legs was normal.

INVESTIGATION: The routine blood investigations were done which were normal except hemoglobin-9.4%.

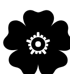
THERAPEUTIC INTERVENTION: *Madhu* and *Haridra* powder was taken in equal quantity (approx. 10 gm each). Both are mixed well and applied on the wound in sufficient quantity.

RESULT: At the end of 4th week complete healing was observed, and there was no open wound area, or any discharge. Healthy skin with minimal pigmentation was observed.

CONCLUSION: Honey and *Haridra* possesses *Shodhan*, *Ropan* and *Varnya* properties, and had potential to heal the burn wound.

On 1st day	After 2nd week	On 4th week

29. Dudhamal TS, Patel P, Healing Potential of Haridra-Madhu in fourth Degree Burn wound of Paraplegic Child: A Single Case Study. Indian Journal of Ancient Medicine and Yoga. [pISSN 0974- 6986, eISSN 0974 - 6994] www.rfppl.co..in
https://www.researchgate.net/publication/360623748_Healing_Potential_of_Haridra-Madhu_in_fourth_Degree_Burn_wound_of_Paraplegic_Child_A_Single_Case_Study



Wound healing effect of Apamarga Kshara Taila and adjuvant drugs in the management of diabetic foot ulcer-a case report[30]

CASE DESCRIPTION: A 42 year old housewife, with 6-year history of type 2 diabetes mellitus, developed a non-healing ulcer of indigenous nature in left great toe with gradual onset of 5 months. Difficulties in walking and pus discharge were clinically noted with history of same duration of time. With previous conservative wound care of 4 months from a diabetic care clinic she did not get satisfactory response, & with day by day worsening wound condition, she was advised for amputation of ulcerated great toe with a view to prevent further sepsis. Patient reported history of regular oral hypoglycemic medications (Cap. Glimepride 1mg and Metformin 500mg) twice in a day since she was diagnosed as a diabetic. Also she was undergoing regular wound dressing with antiseptic solution (povidone iodine 5%) for 4 months.

ON EXAMINATION: Clinical findings of non-healing diabetic foot ulcer with adopted diagnostic methods and prognostic values suggested the case as a diabetic great toe of Grade III (Wagner Maggit classification of diabetic wounds).

THERAPEUTIC INTERVENTION (LOCAL MANAGEMENT): First of all *Kashaya Upakrama* was performed by applying wound wash with *Triphala Kwatha* (decoction preparation of course powder of *Triphala* with 16 times water) before wound dressing. After that *Avasadana* (tissue debridement by *Apamarga Kshara* application), *Taila* (local application of medicated oil preparation-*Apamarga Kshara Taila*), *Kavalika* (gauze piece application for wound bandaging) and *Vrana Bandhana* (wound bandaging) was done with sterile bandaging after each dressing, once a day in morning for 30 days.

RESULT: Complete wound healing was achieved in 76 days. With regular dressing with *Apamarga Kshara Taila* it was recovered with cessation of exudates by day 14, and primary granulation was achieved by day 28. By the 42nd day of regular treatment, she achieved the features of *Shuddha Vrana* (clean wounds) like *Jihvatalabh, Mridu, Swacchha*.

CONCLUSION: Local application of *Apamarga Kshara Taila* and adjuvant Ayurveda treatment have definite role in healing of diabetic wounds. Furthermore it is needed to be explored in more patients of DFU for its scientific validation.

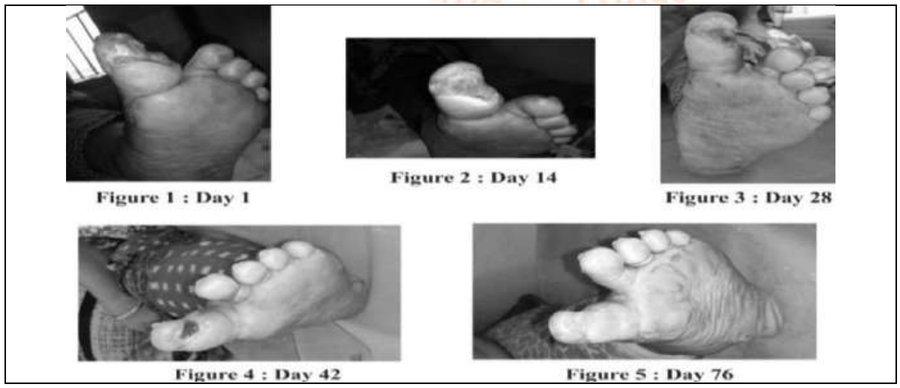


Figure 1 : Day 1

Figure 2 : Day 14

Figure 3 : Day 28

Figure 4 : Day 42

Figure 5 : Day 76

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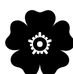
30. Joshi F, Dudhamal TS. Wound healing effect of *Apamarga Kshara Taila* and adjuvant drugs in the management of Diabetic Foot Ulcer - A Case Report. Annals Ayurvedic Med. (AAM) 2020; 9 (4) 320-327. [ISSN: p-2277-4092, e-2347-6923] www.scopemed.org or www.ejmanager.com/aam https://www.researchgate.net/publication/348295252_Case_Report_Wound_healing_effect_of_Apamarga_Kshasra_Taila_and_adjuvant_drugs_in_the_management_of_Diabetic_Foot_Ulcer_-A_Case_Report



Clinical effect of Apamarga Kshara Taila and adjuvant drugs in the management of diabetic wound-a case report[31]

CASE DESCRIPTION: A 70-year-old male diabetic patient with diabetic foot ulcer had complaint of non-healing wound at dorsum of left foot since last 4 years, swelling and hyper pigmentation of skin in the left leg. Patient was known case of diabetes mellitus and hypertension since last 15 years and took inj. Wosulin 30/70 (Biphasic isophane insulin injection) 12units before breakfast, before lunch, before dinner, & inj. Basalog (Insulin glargine injection) 14 units at night since 5years. Tablet Ecosprin AV (150/20) once in a day, tab Enalapril-5mg at morning, tab Nervigen at afternoon, tab. Frusemide 40mg three times in a day from last 15years. Patient had history of leg pain before 4years so he did sudation with hot water bag on both legs. Due to excessive sudation, he got burn on the dorsum of both feet. Ulcer on the right foot healed by regular dressing with povidone iodine ointment and oral antibiotics tablet amoxicillin (500mg) and clavulanic acid 625mg twice in a day for 5days but he didn't get any relief in the ulcer of left foot.

ON EXAMINATION: **Site**: dorsum of left foot, **Size**: (3.5 x 3.2) cm^2; **Shape**: irregular; **Floor**: slough, **Margin**: irregular and fibrosed; **Edge**: ill define; **Discharge**: serous discharge; surrounding skin: hyper pigmented, edematous; **Odour**- slight foul; **Lymph node:** no lymph node palpable at inguinal region; **Pulsation**: dorsalis pedis- feeble, posterior tibial artery pulsation-feeble.

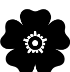
THERAPEUTIC INTERVENTION: *Langhana* was done by advising proper diet regimen like *Mudga Yusha, Jirna Odana* for 50 days. *Haritaki Churna* 5gm at night with luke warm water was given for *Anulomana* purpose for period of 50 days. *Punarnavashtaka Kwatha* 40 ml twice in a day on empty stomach was prescribed to reduce swelling. Local wound management was done by *Triphala Kashaya Prakshalana, Avasadana* and *Utsadana* by *Apamarga Kshara Taila Kavalika* followed by *Vrana Bandhana*. Regular aseptic wound dressing once a day was continued consequently for 50 days up to complete wound healing.

RESULT: Complete wound healing was achieved in 50 days.

CONCLUSION: *Ayurveda* treatment protocol have potential to treat chronic diabetic wound.

On 1st day	On 15th day	On 30th day	On 50th day

31. Koriya H, Kapadiya M, Dudhamal TS, Clinical effect of Apamarga Kshara Taila and adjuvant drugs in the management of Diabetic wound - A Case Report, The Healer Journal, 2021;2(2):106-110. [e ISSN : 2738-9634 p-ISSN: 2738-9863]. www.thehealerjournal.org
https://www.researchgate.net/publication/353697483_Clinical_effect_of_Apamarga_Kshara_Taila_and_adjuvant_drugs_in_the_management_of_Diabetic_wound_-_A_Case_Report



Tissue debridement effect of Apamarga Kshara Taila and adjuvant medications in the management of non-healing venous ulcer: a case series[32]

CASE DESCRIPTION

Case 1- A 68-year-old female homemaker had complaints of non-healing ulcer of endogenous nature with 7-month gradual onset in the left gaiter zone, walking difficulties, and seropurulent discharge with the same duration of time.
Case 2- A 57 year old female homemaker had a history of non-healing venous ulcer in the right medial malleolus, localized burning pain peripheral to ulcer margin & seropurulent discharge from wound for last 5 months.
Case 3- A 42-year-old serviceman had complaint of endogenous non-healing ulcer in the left gaiter zone medial aspect, with gradual onset of 11 months along with localized burning pain.

ON EXAMINATION

Case 1- An irregular-shaped non-healing ulcer of almost 6.1 cm × 7.3 cm × 0.5 cm size with inflamed margins, foul smell, and localized tenderness. Tourniquet test was noted negative in both legs. The patient's investigation profile was reported within normal limits. The patient was a known case of varicosity of long saphenous veins for the past 4 years.
Case 2- Approximately 6.5 cm × 5.7 cm × 0.1 cm sized irregular subcutaneous base ulcer with irregular margin and peri wound tenderness. Tourniquet test was noted negative in both legs. The patient's routine hematology, serology and biochemistry blood profile were reported within normal limits.
Case 3- Approximately 4.1 cm × 3.6 cm × 1.7 cm sized irregular muscular base ulcer with irregular margins and peri wound tenderness, discoloration, and lipodermatosclerosis. Tourniquet test was noted positive in both legs.

THERAPEUTIC INTERVENTION: All patients were treated by applying local *Nadi Swedana* for 10 min before wound dressing once a day, followed by wound wash with lukewarm *Panchavalkala Kwatha* and local wound dressing with *Apamarga Kshara Taila* till complete wound healing. Oral medications such as *Pippali* powder 3 gm with honey twice a day in empty stomach and *Haritaki* powder 6 gm with warm water at bedtime was given until the complete course of treatment. Along with external and internal medications, patients were prescribed a special diet regimen. Patients were advised to take *Mudga Yusha* and *Shali* in food.

RESULT: Complete wound healing was achieved in all three cases on 96 days (Case 1), 27 days (Case 2), and 38 days (Case 3), respectively. The unit healing time (UHT) for all three patients was 4.311 days/cm^3, 7.287 days/cm^3, and 3.677 days/cm^3 respectively, assessed by a unique system of reporting healing time as per a mathematical calculation based on the following equation.

CONCLUSION: Applied principles of wound management by *Acharya Sushruta* are promising therapy in the management of *Sira Janita Dushta Vrana*, i.e., venous ulcer. It should be evaluated in larger samples of VLUs to generate a definitive outcome.

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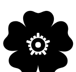
32. Joshi F, Dudhamal TS. Tissue debridement effect of Apamarga kshara taila and adjuvant medications in the management of nonhealing venous ulcer: A case series. Med J DY Patil Vidyapeeth 2021;14:549-53. [ISSN: p-ISSN-2589-8302, eISSN- 2589-8310] www.mjdrdypv.org

https://www.researchgate.net/publication/352728337_Tissue_debridement_effect_of_Apamarga_Kshara_Taila_and_adjuvant_medications_in_the_management_of_nonhealing_venous_ulcer_A_case_series



Efficacy of *Thumari* oil in the management of diabetic ulcer - a case study[33]

CASE DESCRIPTION: A 70 year old female patient had complaint of non-healing wound at right ankle joint with throbbing pain and swelling at the wound site since 15 days. Associated symptoms i.e. pus discharge, foul smell, slough were also present at time of visit. Patient was a known case of type -2 diabetes mellitus (T2DM), hypertension & IHD for last 10 year. The conventional medicines for T2DM, HTN and IHD were continued as prescribed by the physician. No significant history related to family/surgical/allergic history was found.

ON EXAMINATION: **On inspection**: **Size**–approx. (6×3×2) cm; **Shape**–irregular; **Number**-single wound; **Position**- wound at lateral side of rt. ankle joint; **Margin**-irregular; **Edge**-punched out; **Floor** -60% slough and 40% granulation, and approx. 8-10maggots present; **Discharge**-purulent; **Surrounding area**–non pitting swelling and blackish marginal discoloration present on ankle and wound periphery area.

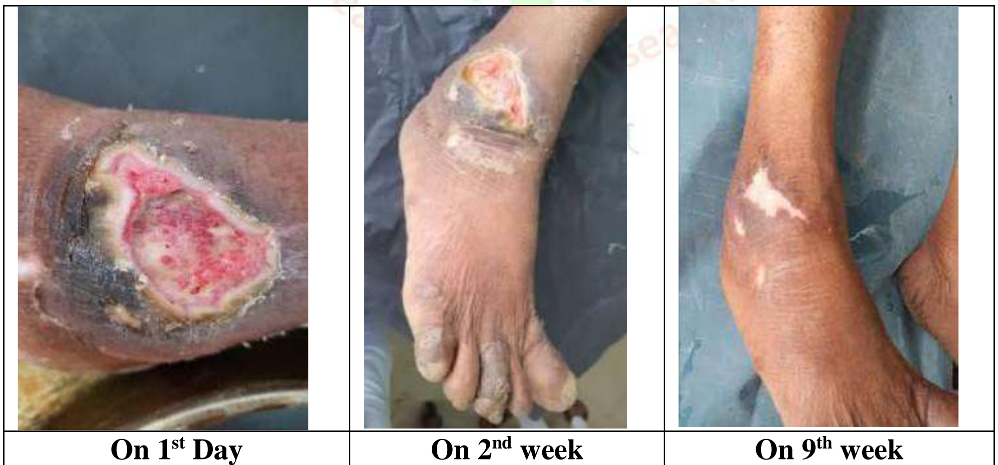
On palpation–**Size** (5.5×4 ×2) cm, tenderness present; **Edge** and **margin**-induration present; **Base**-muscular; **Bleeding**-touch on bleeding absent; **Pulsation**-dorsalis pedis artery, posterior tibial and anterior tibial artery of both foot palpated & found to be regular with normal flow.

INVESTIGATION: Blood investigations like total leukocyte count, differential leukocyte count, hemoglobin, blood urea and serum creatinine were within the normal range while blood sugar level was found elevated (fasting blood sugar/FBS-160mg/dl and postprandial blood sugar/PPBS - 133mg/dl). Patients' vitals were also found in normal limit.

THERAPEUTIC INTERVENTION: On first day of visit, there were numerous maggots in the floor of wound. So, for its removal turpentine was used for initial 3 -5days. After that daily wound dressing was done with local application of *Thumari* oil followed by cleaning with normal saline. Then the wound was covered with sterile gauze and packed with bandage.

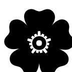
RESULT: After 9th week wound was completely healed with minimum scar.

CONCLUSION: *Thummari* oil has potential to heal the infected diabetic wound without any complications.



On 1st Day | On 2nd week | On 9th week

33. Sushma Yadav, Hiren Mistry, Dudhamal TS. Efficacy of Thumari oil in the management of Diabetic Ulcer – A case study International Journal of AYUSH Case Reports. 2022;6(2):199-206. [e-ISSN-2457-0443] http://www.ijacare.in
https://www.ijacare.in/index.php/ijacare/article/view/336



Wound healing effect of *Thumari Taila* in the management of diabetic foot ulcer[34]

CASE DESCRIPTION: A 68-year-old female had complaint of a non-healing ulcer at her right great toe since last 4-month. Due to that, she had difficulties in walking. There was mild seropurulent discharge from the non-healing ulcer. She was also a known case of diabetes mellitus and was on regular oral hypoglycemic medications (capsule glimepiride 1 mg and metformin 500 mg) along with regular antiseptic dressing from diabetic care clinic. When wound condition got worsened with blackish discoloration, foul smell, and burning feet signs, she was advised for amputation of the right great toe. As she was not convinced for amputation, she switched on to Ayurvedic management.

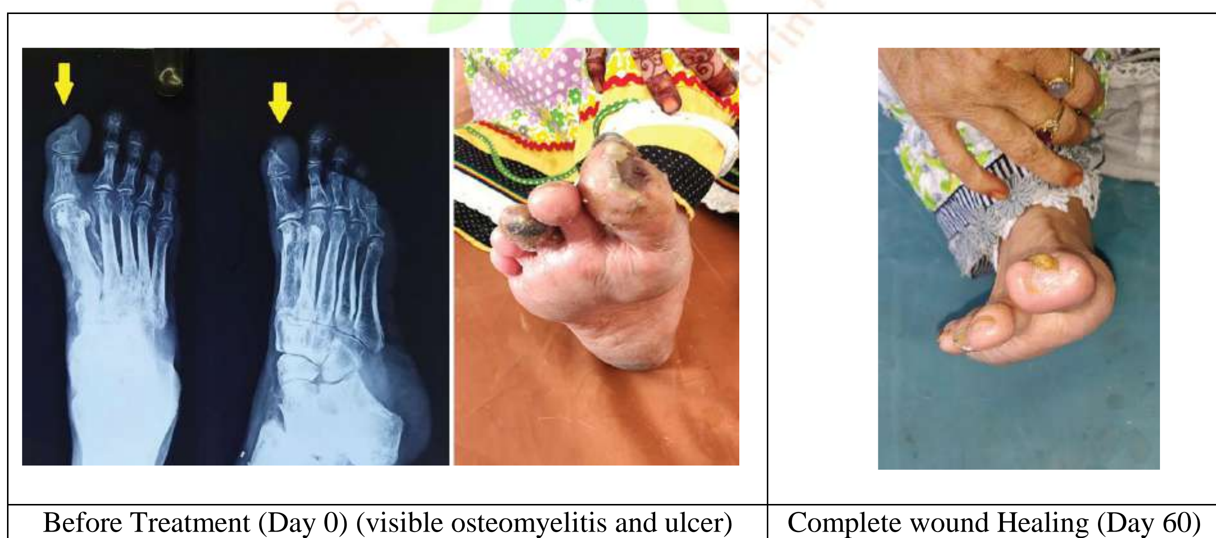
Apart from her diabetic care, she was also taking cilostazol 50 mg 1 time a day for the last 1 year and enalapril 5 mg once a day for the last 2 years. She was taking oral analgesic medicines: sometimes, capsule diclofenac sodium 75 mg once a day and oral multivitamin supplement tablet 10 mg once a day on a regular basis after developing ulceration.

ON EXAMINATION: Ulcer at right great toe; **Size** (By Vernier scale)-2.74×2.11×0.81; **Margin**-inflamed and irregular; **Edge**-punched out; **Appearance**-ugly and tidy; **Condition**-necrotic, infected, open wound; **Edema**-present; **Odor**-foul (grade III: unpleasant but tolerable); **Discharge**-seropurulent; **Tenderness** ++.

ON INVESTIGATION: X-ray: Acro-osteolysis of distal phalanx of great toe, metatarsal and proximal phalanx showed destructive changes, marginal soft tissue destruction in the great toe, & osteoporotic bone.

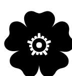
THERAPEUTIC INTERVENTION: Local wound care was done with *Triphala Kwatha,* wound wash followed by wound dressing with *Thumari Taila* packing. Sterile bandaging was applied after each dressing for 60 days consequently. During wound dressing, instrumental debridement was done on a daily basis up to achieving clean and primary granulated wound up to 30 days.

RESULT: Primary granulation was achieved by day 30, and by the 45th day of regular treatment, wound contraction was improved significantly. Complete wound healing was achieved by 60th day.



Before Treatment (Day 0) (visible osteomyelitis and ulcer)	Complete wound Healing (Day 60)

34. Joshi FP, Dudhamal TS. Wound-healing effect of Thumari Taila in the management of diabetic foot ulcer. Journal of Ayurveda 2022;16:252-6. [p-2321-0435] www.journayu.in
https://www.researchgate.net/publication/363924302_Wound-Healing_Effect_of_Thumari_Taila_in_the_Management_of_Diabetic_Foot_Ulcer



Leech therapy and adjuvant Ayurveda treatment in the management of diabetic foot ulcer with atherosclerosis[35]

CASE DESCRIPTION: A 54 year old male patient had complaint of blackening of the great toe of right lower limb since 4 months, and other associated symptoms of intermittent claudication (Grade 4), burning in sole, and often numbness in the foot since 6 to 7 months. The patient was a known case of diabetes mellitus (HB1Ac: 9.90) and hypertension (blood pressure: 130/80 mm/hg). The patient had undergone coronary artery bypass graft before 8 years. The patient was taking tablet metoprolol**,** tablet aspirin**,** tablet clopidogrel**,** tablet Atorva on daily basis.

ON EXAMINATION: Black right great toe of right foot, ill-defined line of demarcation and mild serous discharge, excoriated skin with whitening at the periphery. **On Palpation**: temperature normal, mild tenderness**,** feeble femoral artery, & downstream non palpable arteries. **Size and site:** 2.5 cm×1.5 cm at base of greater toe of right foot; **Odour:** no foul odour; **Discharge:** mild serous; **Floor:** slough present, which covers 75% of the floor; **Edge:** inflamed but sloping; **Margin:** regular; **Tenderness:** mild; **Temperature:** normal; **Surrounding skin:** healthy, no discoloration.

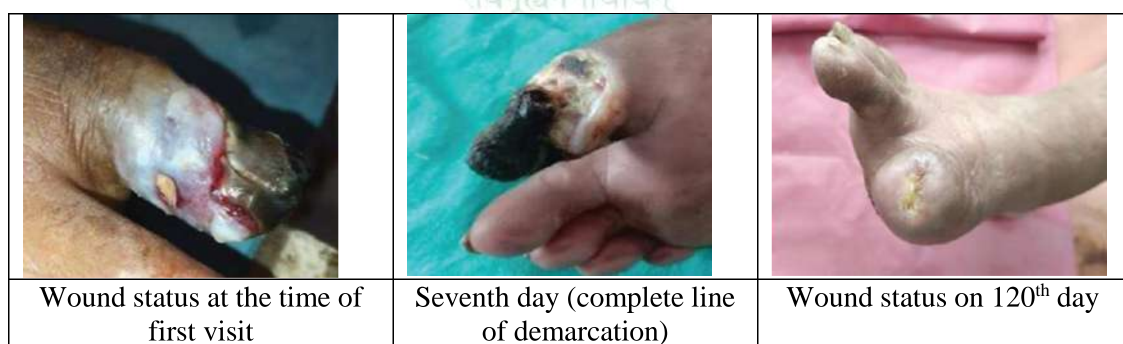
INVESTIGATION: Laboratory investigations were carried out before treatment and after treatment and found within normal limit. Bilateral lower limb computed tomography angiography showed diffuse atherosclerotic fibro-calcified wall plaques in abdominal aorta, iliac, femoral and both leg arteries.

THERAPEUTIC INTERVENTION: 5 sitting of leech application with the interval of week over gangrenous toe initially, later done on the open wound as well through the course of main arterial branches (3-4 *Jalauka* at a time). Daily dressing: affected part was cleaned with *Triphala Kwath* followed by application of *Apamarga Kshara Taila*. After amputation, open wound was cleaned with *Triphala Kwath* followed by application of *Thumari Taila* for better healing. *Sanjivani Vati* 1 tab tds with water & *Pippali Churna* 3 gm bd after food with warm water was given orally.

RESULT (Weekly Assessment):

Day	Tenderness	Discharge	Floor	Wound size (cm^2)
1st	4	3	4	-
14th	3	2	3	-
21st	1	1	1	2.5×1.5
42nd	1	1	-	2×1
55th	1	1	-	Healed
120th	1	1	-	Healed

CONCLUSION: Post-diabetic ischemic foot should be treated by bearing in mind the two aspects of neo-angiogenesis & fibrinolytic effect of the therapies. Both of these effects can be achieved by *Jalauka* use.



Wound status at the time of first visit	Seventh day (complete line of demarcation)	Wound status on 120th day

35. Sonani SR, Dudhamal TS. Leech therapy and adjuvant Ayurveda treatment in the management of diabetic foot ulcer with atherosclerosis. BLDE Univ J Health Sci 2023;8:192-6. [ISSN-p-2468-838X, e- 2456-1975] DOI:10.4103/bjhs.bjhs_135_22 www.bldeujournalhs.in https://www.researchgate.net/publication/369962035_Leech_therapy_and_adjuvant_Ayurveda_treatment_in_the_management_of_diabetic_foot_ulcer_with_atherosclerosis

Effect of Thumari Malahara in the management of post-debridement wound of Fournier's Gangrene[36]

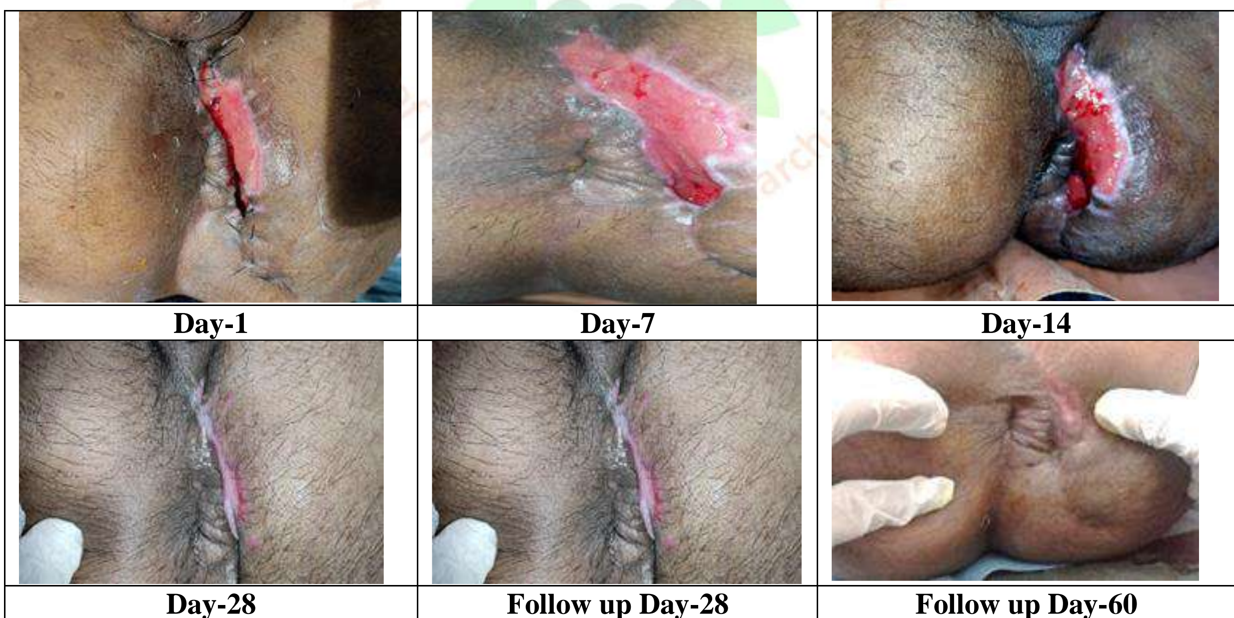
CASE DESCRIPTION: A 59-year-old male patient was referred to Shalya Tantra OPD on 03/10/2022 for needful management. Patient had a history of debridement for Fournier's Gangrene 6 weeks back and secondary suture taken 2 weeks back. Even after around 15 days of secondary closure, wound was not approximated; patient lost the ability to mobilize and was on wheel chair due to severe pain.

ON EXAMINATION: Wound dehiscence had occurred. Wound was unhealthy with slough and discharge; margin was irregular and edge was sloping. Surrounding skin was congested with tenderness. The wound was not connected internally to anal canal. Regional lymph nodes were not palpable. Patient was admitted, then on first dressing all sutures were removed followed by local dressing.

THERAPEUTIC INTERVENTION: Daily wound cleaning was done with normal saline and dressing was done with application of *Thumari Malahara* until complete healing. *Triphala Guggulu* 1gm thrice daily and *Isabgol* husk 2 tablespoonsful at bedtime with lukewarm water was given for one month.

RESULTS: Pain was significantly reduced from grade 3 to grade 2 in first week. Patient was ambulatory in 2nd day of dressing. Pain completely disappeared within 3rd week. Discharge got reduced from seropurulent to serous on 2nd week. Initial size of wound was 64 cm^3. Wound healed completely in 4 weeks with Unit Healing Time of 0.437days/cm^3. Proper healing from base of the wound with healthy granulation was observed.

CONCLUSION: *Thumari* as *Malahara* formulation along with adjuvants like oral administration of *Triphala Guggulu* and *Isabgol* has potential to heal post debrided wound of Fournier gangrene without any complications.

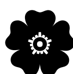


Day-1 | Day-7 | Day-14

Day-28 | Follow up Day-28 | Follow up Day-60

36. Paudel, D., Dudhamal, T. S., & Bastakoti, K. K. (2024). Effect of Thumari Malahara in The Management of Post-debridement Wound of Fournier's Gangrene. *Journal of Ayurveda Campus*, *4*(1).https://doi.org/10.51648/jac70

https://jacjournal.org/jac/index.php/jac/article/view/70



Treatment of second-degree scald burn with the application of *Madhuchistadi Ghrita*[37]

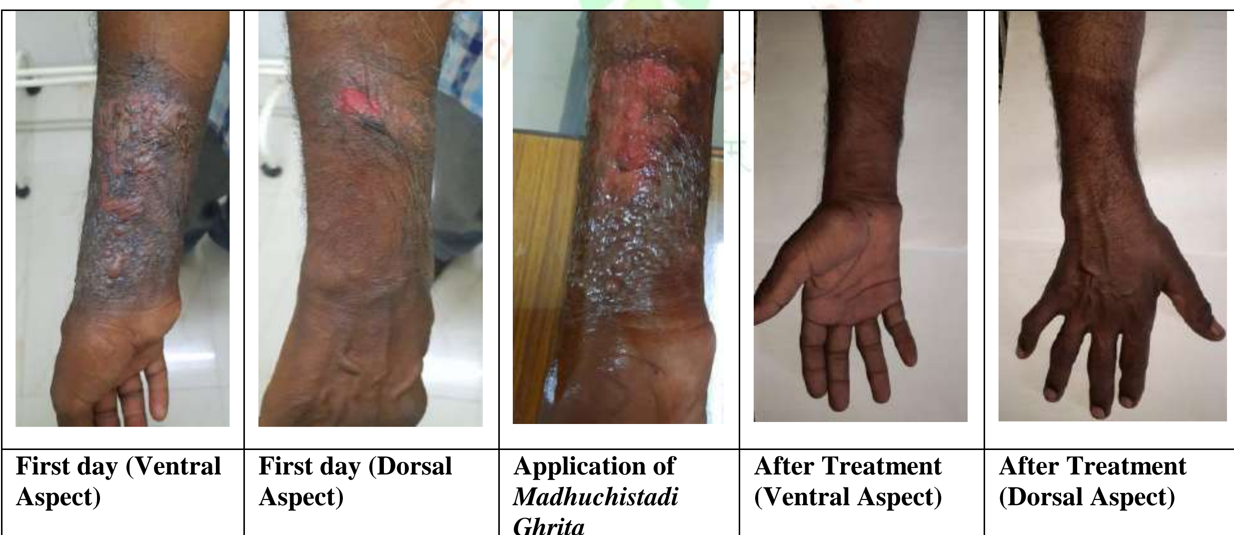
CASE DESCRIPTION: A 45-year-old male presented to the outpatient department for the management of a burn on the right hand, with complaints of burning pain and itching for four days. The patient had a history of scald burn due to hot tea. The patient had previously consulted to district civil hospital, and took treatment such as local application of silver sulfadiazine two times a day and oral analgesic tab of paracetamol 500mg twice a day for four days.

ON EXAMINATION: The general condition of the patient was fair, and on local examination, the patient presented with blisters and mottled skin over the ventral surface of the right forearm extended up to the dorsal aspect of the forearm and minor serous discharge from the wound. All the parameters of laboratory investigations were within normal range. After a thorough examination of clinical findings patient was diagnosed with 1.5% TBSA (Total Body Surface Area) second-degree scald burn.

THERAPEUTIC INTERVENTION: On the first visit, a thorough cleaning of the burn wound was done with normal saline, and devitalized tissue was mechanically removed. After that *Madhuchistadi Ghrita* was applied over the wound. Daily cleaning with normal saline and application of *Madhuchistadi Ghrita* was done for 15 days twice a day.

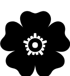
RESULTS: After the application of the *Madhuchistadi Ghrita* burning sensation on the wound was significantly reduced by 2nd day onwards and completely diminished on 3rd day. Serous discharge was completely reduced by 3rd day onwards from the wound site. The itching on the wound completely diminished by the 7th day. Wound healing started from second day onwards. After seven days of therapeutic intervention, 70% of the wound was covered with newly formed tissue, and the whole wound was covered with pink epithelialization tissue. At the end of the 15th day, wound was healed completely without any wound contracture. On a follow-up period of 1-month, excellent recovery of skin pigmentation and skin appendages was observed over the wound site.

CONCLUSION: The scald superficial partial thickness burn can be treated by application of *Madhuchistadi Ghrita* without any untoward effects. As this is only a single case report needs further study on a larger population to validate and prove its effectiveness.



First day (Ventral Aspect)	First day (Dorsal Aspect)	Application of *Madhuchistadi Ghrita*	After Treatment (Ventral Aspect)	After Treatment (Dorsal Aspect)

37. Riddhi J Ganatra, Tukaram Sambhaji Dudhamal. (2024). Treatment of Second-Degree Scald Burn with the Application of Madhuchistadi Ghrita. *International Journal of Ayurveda and Pharma Research*, *12*(1), 135-137. https://doi.org/10.47070/ijapr.v12i1.3051
https://ijapr.in/index.php/ijapr/article/view/3051



Wound healing effect of Thumri (Securinega leucopyrus) and supportive Ayurveda therapy in Beurger’s Ulcer[38]

CASE DESCRIPTION: A 65 year old male patient had complaint of ulcer at lateral malleolus of his left foot. Patient also complained of burning and throbbing pain in left foot, and ulcer at lateral malleolus. Patient had the habit of smoking 15-20 bidi per day since last 25 years. Patient also presented symptoms of intermittent claudication, & sleep disturbance with worst pain experienced at night.

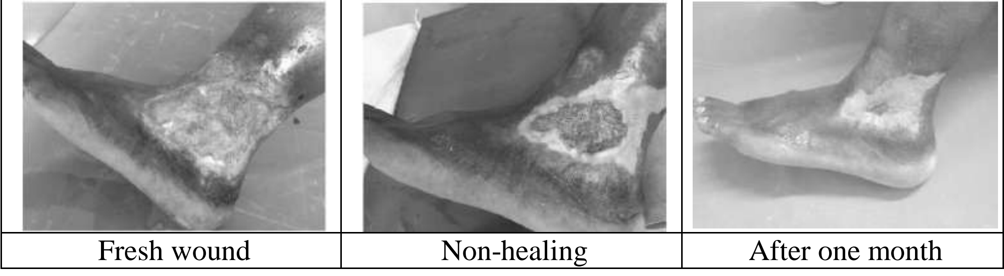
ON EXAMINATION: The ulceration was at lateral malleolus with slough, inflamed wound edges, black discoloration of the surrounding skin, inflammation and cellulitis. The status of arterial pulsation on palpation was normal in femoral artery, feeble in popliteal artery, while absent in dorsalis pedis artery and posterior tibial artery of left leg. The right leg arterial pulsations were normal for femoral artery, & feeble in popliteal artery, dorsalis pedis artery and posterior tibial artery. The left lower extremity was cold as compared to right. There was hyperesthesia of left foot & its skin shined more as compared to right foot. The size of wound was 8 x 6 x 2 cm & triangular in shape.

INVESTIGATION: The routine blood investigations were carried out & found within normal limit. The report of colour doppler had shown diffuse stenosis with segmental total occlusion in bilateral anterior and posterior tibial arteries and bilateral dorsalis pedis artery.

THERAPEUTIC INTERVENTION: Tab. pentoxyphyllin 400mg two times a day was given for initial one month; ecosprin 75mg two times a day was prescribed for 15 days & Inj Diclofenac sodium 75mg at night was given as per need. *Avagaha Swedan* with *Panchavalkal* decoction was done daily in the morning by keeping the foot in decoction for 10-15 minutes before dressing. *Parisheka* was done with *Bala Taila* after foot bath for 10 minutes daily. Then *Nadisweda* by *Nadiyantra* was done regularly for 5 minutes of both lower legs. Cleaning of wound was done by *Panchavalkala* decoction, and wound dressing was done with S. leucopyrus powder mixed with *Tila Taila* in equal quantity. The wound was covered loosely with sterile gauze piece and bandaged.

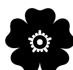
RESULT: Slough, swelling, redness and pain was relieved within 7 days. The wound became fresh having healthy granulation and good looking within one month. Wound almost healed within four months of treatment with formation of white scar.

CONCLUSION: The paste of Thumari (*Securinega leucopyrus)* has healing potential in non-healing arterial ulcer due to TAO. This case advocates for further extensive clinical trials to explore the herb utility in a more definitive manner.



Fresh wound	Non-healing	After one month

38. Dudhamal TS. Wound healing effect of Humri (*Securinega leucopyrus)* and supportive Ayurved Therapy in Beurger’s Ulcer - A Case Report. Annals of Ayurvedic Medicine (AAM) 2016;5 (1-2):37-43. [pISSN: 2277-4092, eISSN-2347-6923] www.scopemed.org or www.ejmanager.com/aam https://www.researchgate.net/publication/318969285_Wound_Healing_Effect_of_Humri_Securinega_leucopyrus_and_Supportive_Ayurveda_Therapy_in_Beurger's_Ulcer

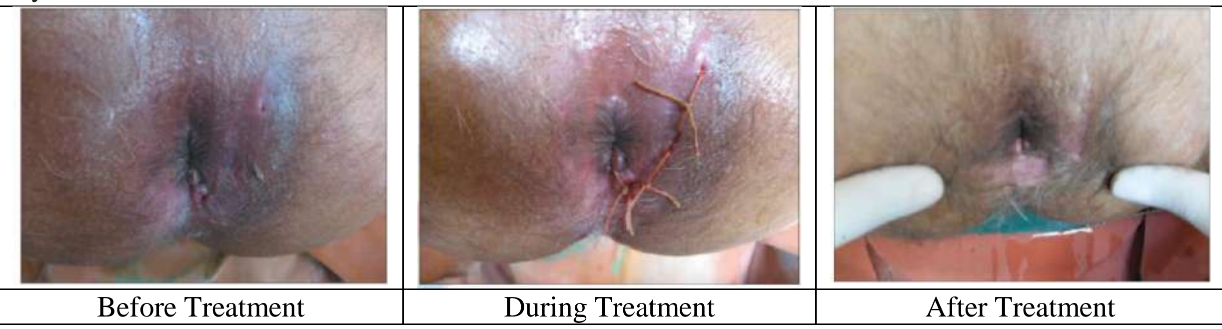


A comparative clinical study of Snuhi Ksheera Sutra, Tilanala Kshara Sutra and Apamarga Kshara Sutra in Bhagandara (Fistula-in-ano)[39]

PURPOSE: To evaluate the efficacy of *Tilanala K.S.* and *Snuhi Ksheera Sutra* in the management of Bhagandara and also to compare the clinical efficacy of *Tilanala K.S.* and *Snuhi Ksheera Sutra* with standard *Apamarga K.S.*

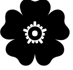
MATERIAL AND METHODS:
STUDY DESIGN: This study is an open labelled randomized clinical trial of 33 diagnosed cases of *Bhagandara* of either sex randomly allocated under 3groups.
INCLUSION CRITERIA: Patients of age group 25-70 years with presenting symptoms of fistula-in-ano associated with controlled tuberculosis, diabetes mellitus, hypertension, anemia, amoebiasis were also included in the study.
EXCLUSION CRITERIA: Patients with tuberculosis of hip joint or spine, osteomyelitis of femur or pelvic bones, chronic or acute ulcerative colitis, intestinal and pelvic malignancies, venereal diseases or HIV, strictures of urethra causing urethral sinuses, Crohn's disease, and pregnancy were excluded.
INVESTIGATIONS: Routine hematological, biochemical, urine and stool examinations were done to rule out the pathological conditions. X-ray chest PA view and fistulography done (if required),
GROUPING:
Group A: ligation with *Snuhi Kshara Sutra* (trial group).
Group B: ligation with *Tilanala K.S.* (trial group).
Group C: ligation with *Apamarga K.S.* (control group).

RESULTS: In patients of Group-A (with Mean Unit Cutting Time = 7.42 days/cm), statistically significant results were seen in itching sensation, swelling and size of wound. In patients of Group-B (with Mean Unit Cutting Time = 9.76 days/cm), statistically highly significant results were observed in all symptoms like pain, discharge, itching sensation, swelling and size of wound. In patients of Group-C (with Mean Unit Cutting Time = 8.82days/cm), statistically significant result was observed in itching sensation while highly significant results were seen in pain, discharge, swelling and size of wound.
CONCLUSION: *K.S.* threading (KST) therapy is a radical cure in the treatment of *Bhagandara* without complications and recurrence. The UCT of *Snuhi Ksheera Sutra* (7.42 days) was lower due to its acidic nature compared to the standard *Apamarga K.S.* group (9.76 days) but the cutting was not corresponding to the healing rate. So the *Snuhi Ksheera Sutra* cannot be used as a substitution to *Apamarga K.S.* in the management in *Bhagandara* but it can be employed in the recurrent fibrosed cases of *Bhagandara*. The UCT of *Tilanala* was higher (9.76 days/cm) compared to the standard *Apamarga KS* group but it did not produce any complications like burning sensation, abscess, etc. Thus, the *Tilanala KS* can be effectively used in the management of Bhagandara in the place of the *Apamarga KS* in its non-availability.



Before Treatment	During Treatment	After Treatment

39. Lobo SJ, Bhuyan C, Gupta SK, Dudhamal TS. A comparative clinical study of Snuhi Ksheera Sutra, Tilanala Kshara Sutra and Apamarga Kshara Sutra in Bhagandara (Fistula in Ano). *Ayu*. 2012;33(1):85-91. doi:10.4103/0974-8520.100319; www.ayujournal.org
https://www.researchgate.net/publication/232226300_A_comparative_clinical_study_of_Snuhi_Ksheera_Sutra_Tilanala_Kshara_Sutra_and_Apamarga_Kshara_Sutra_in_Bhagandara_Fistula_in_Ano



A clinical study of Bahgandara (Fistula-in-ano) treated with Apamarga Ksharasutra of 3719 cases[40]

PURPOSE: To evaluate the effect of *Apamarga Ksharasutra* in the treatment of different types of fistula-in-ano.

MATERIAL AND METHODS:

STUDY DESIGN: It is a single armed open randomized clinical trial on 3719 cases of fistula-in-ano.

DIAGNOSTIC CRITERIA: Patients were diagnosed on the basis of sign and symptoms of pain, tenderness, swelling/indurations, discharge and itching present around the anus. Confirmatory diagnosis of fistula-in-ano was done by doing probing, proctoscopy & fistulography.

INCLUSION CRITERIA: All clinical diagnosed cases of fistula-in-ano aged b/w 15-70 years of either sex with associated conditions like pulmonary tuberculosis, diabetes mellitus, leprosy, and controlled hypertension were also selected.

EXCLUSION CRITERIA: Tuberculosis of hip joint/spine, intestinal and pelvic carcinoma, positive cases of VDRL, HIV and HBsAg, urethral stricture & sinus, and pregnancy were excluded. Fistula-in-ano secondary to ulcerative colitis and colloid malignancy of the rectum were also excluded.

INVESTIGATIONS: Blood: DLC, TLC, Hb%, BT, CT, ESR, RFT, LFT, VDRL, HIV, diabetic profile: FBS, PPBS, HBAIC; and radiological examination: X-ray of chest, fistulography; and other examination like stool, urine, pus culture, biopsy, and sensitivity test were done.

OPERATIVE PROCEDURES: Under suitable anaesthesia with all aseptic precautions, lubricated index finger was passed through anal canal and a curved or straight probe according to need was introduced in external opening of fistulous tract with other hand. The probe was guided gently into the fistulous tract till tip of the probe felt with finger of other hand in the rectum/anus and with the help of finger, the tip of probe was directed out from the anal opening. The *Ksharasutra* passed into the eye of the probe and then pulled out from the anal opening, thus it was passed through the fistulous tract and anal openings. Then both the ends of the thread were tied by reef knots with one finger loose to the skin. The cotton pad soaked with medicated oil (*Jatikalpa* oil) was put on the external opening of the fistula and T-bandage was applied.

GENERAL MANAGEMENT: Warm water sitz bath with *Sphatikadi Yoga* 3 times a day & per anal installation of 10 ml *Jatikalpa Tail* o.d (at bed time) was advised. Oral medicines included: 1 tab of *Chakreshwar Rasa* b.d after meals followed by 10ml of *Maharasnadi Kwath*, 2 tab of *Gandhak Rasayana* b.d after food followed by warm water. Daily anti-septic dressing was done.

RESULT: It was noted that for complete remission of the disease 43.66% of cases took 3 months, 33.07% cases took 6 months, 17.31% of cases had taken 9 months, while 3.13% of cases were cured within 12 months of the treatment and rest of cases remained unchanged up to 18 months.

CONCLUSION: This study shows significant contribution of *Apamarga Ksharasutra* in fistula-in-ano cases, which can be promoted as an operative procedure in general medical practices for the disease.

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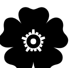
40. Bhuyan C, Dudhamal TS, Gupta SK. A Clinical study of Bahgandara (Fistula-in-ano) treated with Apamarga Ksharasutra of 3719 Cases. Indian Journal of Ancient Medicine and Yoga (JAMY) 2013; 6(4): 177-186. [ISSN: p.0974- 6986, e. 0974 -6994] https://www.researchgate.net/publication/277639033_Bhuyan_C_Dudhamal_TS_Gupta_SK_A_Clinical_study_of_Bahgandara_Fistula-in-ano_treated_with_Apamarga_Ksharasutra_of_3719_Cases_Indian_Journal_of_Ancient_Medicine_and_Yoga_JAMY_2013_64_177-186_ISSN_p74-_6



Horse shoe fistula-in-ano treated with Ksharasootra-case report[41]

CASE DESCRIPTION: A 20 year old male patient of *Vatakaphaj Prakriti* had complaints of intermittent perianal pain, perianal pus discharge and constipation since one year. There was no previous history of surgery and other illness noted by patient.

ON EXAMINATION: On inspection at perianal region two external opening at 10 o'clock and 3 o'clock positions were noted. After probing, it was found that tract of 3 o'clock position and 10 o'clock positions both were connected to the internal opening at12 o'clock position. The induration was noted at anterior perianal region having horse shoe fistulous track.

INVESTIGATION: TRUS report showed that 5-6 cm long fistula-in-ano in left perianal region and 18x13 mm sized collection in right perianal region 3 cm length fistula. The length of both external opening from anal verge was 3 cm and open internally below ano-rectal ring. Routine blood and urine examinations of patient were done and found within normal range.

THERAPEUTIC INTERVENTION: Under spinal anaesthesia, with all aseptic precautions, probing was done from external opening at 3 o'clock position and internal opening found at 12 o'clock position which travels up to 10 o'clock position anteriorly (horse shoe fistula). *Kshara Sootra* threading was done from external opening 3 o'clock positions to internal opening at 12 o'clock position and both ends of thread were tied loosely. Simultaneously *Kshara Sootra* threading was done from external 3 o'clock position to external 10 o'clock position. At 3 o'clock opening some part of tract was excised to reduce the time of treatment and due to induration. *Kshara Sootra* was changed on weekly interval by inserting a new one in the fistula tract by applying 2% xylocaine jelly till complete cut through of fistulous tract.

RESULT: Total 2 months and 23 days for 1st thread, and 3 months and 15 days for second thread was required for complete cutting and healing of fistulous tract. The time taken for complete cut through of track differs due to length of the track. The unit cutting time of fistulous tract in this case was found to be 0.62 cm per week.

CONCLUSION: The study shows that horse shoe fistula can be treated with *Guggulu* based *Ksharasootra* without any adverse effects. As it is a single case definitive conclusion can be drawn after checking it on a large population.

Ksharasutra in fistula tract	After 3 months	Complete cut through of tract

41. Meena RK Dudhamal TS Gupta SK; HORSE SHOE FISTULA-IN-ANO TREATED WITH KSHARASOOTRA- CASE REPORT; IAMJ: Volume 2; Issue 3; May - June 2014 [ISSN:2320 5091] www.iamj.in
https://www.researchgate.net/publication/272498597_HORSE_SHOE_FISTULA-IN-ANO_TREATED_WITH_KSHARASOOTRA-CASE_REPORT

Guggulu based Ksharasutra in the treatment of Bhagandara (fistula-in-ano): case report[42]

CASE DESCRIPTION: A 32 year old male patient of *Pittavataj Prakriti* had complaints of perianal pus discharge, itching, intermittent bleeding and swelling since last 20 days with compromised quality of life. Patient worked as a government service and had habit of consuming spicy foods and addiction to tobacco chewing. Patient also had complaints of recurrent loose motion and constipation, i.e symptoms of *Grahani* (Irritable Bowel syndrome-IBS).

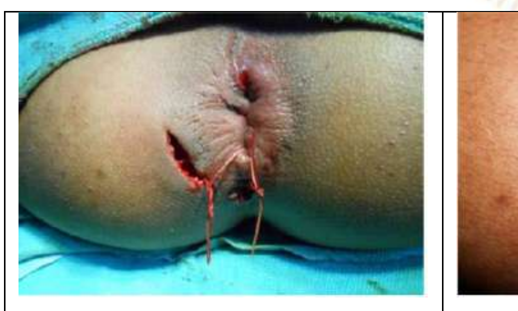
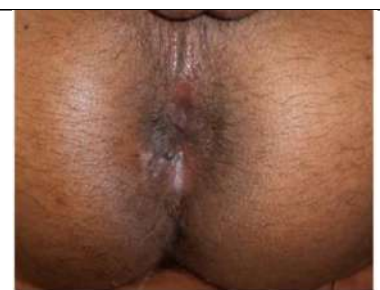
ON EXAMINATION: On inspection at perianal region two external opening at 6 o'clock and 7 o'clock positions were noted. After probing it was found that tract of 6 o'clock position and 7 o'clock positions both were connected to the internal opening at 6 o'clock position.

INVESTIGATION: TRUS report showed that 33 mm long linear fistula in right perianal region and 14 mm long linear fistula in posterior perianal region. The length of both external opening from anal verge was 3 cm and open internally below ano-rectal ring. The induration was noted at posterior and right side of anus of perianal region having two external openings. Routine blood and urine examinations of patient were done and found within normal range.

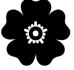
THERAPEUTIC INTERVENTION: Under spinal anaesthesia, with all aseptic precautions, the track or cavity at 7 o'clock to 9 o'clock was laid open and drained and one Ksharasutra was applied form external opening at 7 o'clock position to internal at 6 o'clock position. Another Ksharasutra was also applied at 6 o'clock position and internal at 6 o'clock position.

RESULT: The initial length of 1st thread (external 7 o'clock to internal 6 o'clock) was 8 cm and that of second thread (external 6 o'clock to internal 6 o'clock) was 5 cm. The 1st thread (external 6 o'clock to internal 6 o'clock) cut through within 30 days and second (external 7 o'clock to internal 6 o'clock) cut through within 60 days. After 2 months patient was free from all symptoms of fistula with normal scar and without any complications. The unit cutting time (UCT) of first thread was 7.5 days/cm and second one had UCT of 6.8 days/cm.

CONCLUSION: Multiple fistulae of *Pittaj* dominant *Prakriti* patients can be treated with *Guggulu* based *Ksharasutra* without any adverse effects. As it is a single case study so it require furthet study in large samples for definitive results.

		
Ksharasutra in fistulous tract	Post-operative 8 Days	Healed after 2 months

42. Meena Rk, Dudhamal Ts; Guggulu Based Kaharasutra In The Treatment Of Bhagandara (Fistula-In-Ano): Case Report; Ayushdhara 2014;1(1):20-24; [Issn: 2393-9583] http://ayushdhara.in https://www.researchgate.net/publication/272498823_GUGGULU_BASED_KAHARASUTRA_IN_THE_TREATMENT_OF_BHAGANDARA_FISTULA-IN-ANO_CASE_REPORT#:~:text=During%20the%20treatment%20patient%20was,in%20multiple%20fistula%2Din%20ano



Partial fistulectomy and Guggulu based Ksharasootra in the management of Bhagandara (Fistula-in-Ano) - a case report[43]

CASE DESCRIPTION: A 35 year old male patient had complaints of perianal pain, pus discharge, constipation and intermittent fever. These symptoms were present since last seven days with disturbed routine. Patient suffered from same complaints one and half years ago with pus discharge and was subsided with allopathic treatment like antibiotics and analgesic. Patient had the habit of consuming non-vegetarian diet, spicy foods and tobacco. As patient is an engineer he experiences aggravation of symptoms on duty and is used to take allopathic medicines for pain relief.

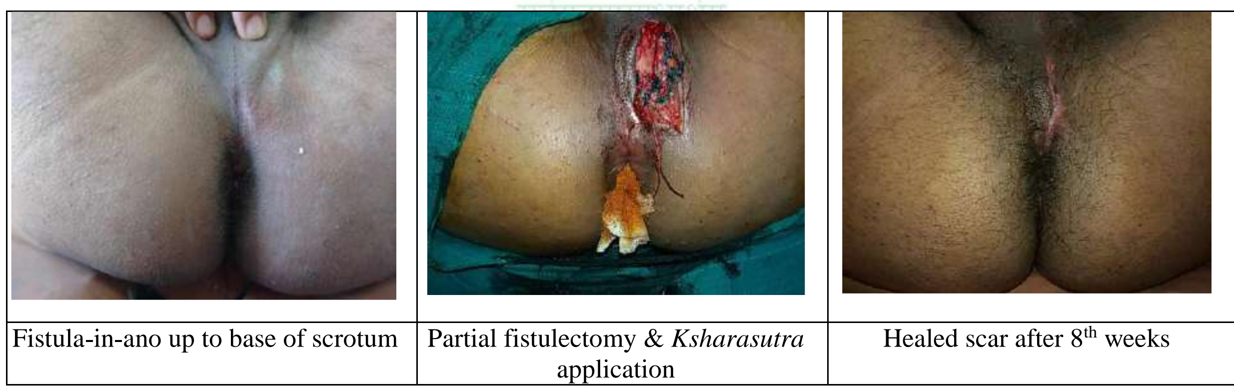
ON EXAMINATION: One external opening at 1 o'clock position just below the scrotum was observed on perineal examination in lithotomy position. After probing from external opening, a tract was revealed, which seemed to be connected with internal opening at 12 o'clock position.

INVESTIGATION: In TRUS, 6 cm long linear non-branching fistulous track was delineated in right perianal region with external opening at 1 o'clock position in skin and internal opening at 12 o'clock position just proximal to the anal verge. Routine blood and urine examinations were done and found within normal range.

THERAPEUTIC INTERVENTION: Under spinal anaesthesia, with all aseptic precautions, probing was done from external opening, and internal opening was revealed at 12 o'clock position. The excision of the fistulous tract was done from external opening to the level of anal sphincter with help of electric cautery. After that a *Ksharsootra* was applied in remaining part of the tract. Then a chronic fissure bed with tag at 6 o'clock was excised by electric cautery. After proper haemostasis was achieved, betadine soaked pack was kept in anal canal and T-Bandaging was done.

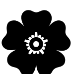
RESULT: The wound became cleaned and healing was promoted with healthy granulation tissue after 15 days. Sitz bath, cleaning with *Panchavalkala* decoction and dressing with *Shatdhauta Ghrita* continued along with *Ksharasootra* change, and it was observed that there was healthy granulation, epithelisation and contraction of wound during weekly assessment as shown in the figure. Total 2 months were required for complete cutting and healing of the fistulous tract. The unit cutting time of fistulous tract in this case was 7.5 days per cm.

CONCLUSION: Chronic anterior fistula-in-ano can be managed by partial fistulectomy and *Guggulu* based *Ksharasootra.* Post fistulectomy wound healed early by cleaning with *Panchavalkal* decoction and dressing with *Shatadhauta Ghrita*. As it is a single case study it requires further validation.



Fistula-in-ano up to base of scrotum	Partial fistulectomy & *Ksharasutra* application	Healed scar after 8th weeks

43. Nema Aditya, Dudhamal TS, Mahanta VD, Gupta SK. Partial Fistulectomy and Guggulu Based Ksharasootra in the Management of Bhagandara (Fistula-in-Ano) - A Case Report. International Journal of Innovative and Applied Research (IJIAR). 2015; 3(1):19-23. [ISSN 2348- 0319] Impact Factor: 0.739 www.journalijiar.com https://www.researchgate.net/publication/287209997_CASE_REPORT_Partial_Fistulectomy_and_Guggulu_Based_Ksharasootra_in_the_Management_of_Bhagandara_Fistula-in-Ano_-_A_Case_Report



Management of Bhagandara (high anal fistula-in-ano) with Ksharasutra-a case study[44]

CASE DESCRIPTION: A 55 year old male patient of *Kaphapittaja Prakriti* had complaints of pain in perianal region, soiling of undergarments, constipation and occasional per rectal bleeding. Patient was operated two times for anorectal disease, first hemorrhoidectomy was done for piles in 2004 after hospitalization for 2 days and dressing of wound was done for 1 month after surgery. Second time debridement of perianal abscess was done on 20th June 2010 and complete healing of wound occurred in one and half month after regular dressing and medications. After few days patient again had complaints of soiling undergarments due to discharge coming from an opening.

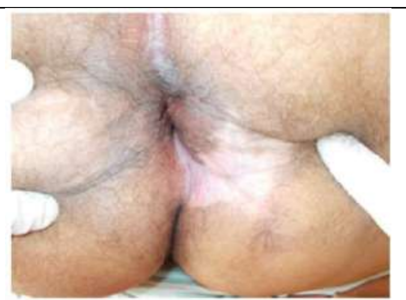
ON EXAMINATION: On per rectal examination external opening at 5 o'clock position was noted. After probing under local anaesthesia, it was found that tract of 5 o'clock position was connected to the rectum and diagnosis was made with fistulogram which showed high level fistula. The length of external opening from anal verge was 4 cm and open internally above anorectal ring. The induration was noted at posterior position having big cavity.

INVESTIGATION: The patient was advised again for fistulogram which showed high anal fistula-in-ano so treating surgeon referred the patient to Ayurvedic hospital for treatment with *Ksharasutra*. Routine blood and urine examinations of patient were done and found within normal range.

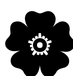
THERAPEUTIC INTERVENTION: Under spinal anaesthesia, with all aseptic precautions, the probing of the fistulous tract from external opening was done to ensure the internal opening. *Apamarga Ksharasutra* was applied with the help of the probe in to the tract and after passing through the anal canal; both ends of thread were tied loosely and T- bandage was applied. Then another *Ksharasutra* was applied from the same opening through the cavity at posterior end and was made external to external threading to drain the cavity.

RESULT: After 6 months of period patient was free from all symptoms of fistula leaving a scar after healing the fistulous tract as shown two below. This patient had recovered completely and was followed up for any recurrence upto two years.

CONCLUSION: High anal and recurrent fistula can be treated with *Ksharasutra* without any untoward effects and recurrence. As this is a single case study, it requires larger samples for further validation.

		
Ksharasutra in fistula tracts	Post ksharasutra during treatment	Follow up after two years

44. Dudhamal TS. Management of Bhagandara (High Anal Fistula-in-Ano) with Ksharasutra- A case study. Ayurlog: National Journal of Research in Ayurved Science. 2016; 4(1): 216-222. [ISSN 2320-7329] www.ayurlog.com
https://www.researchgate.net/publication/297547576_Ayurlog_National_Journal_of_Research_in_Ayurved_Science_Management_of_bhagandara_high_anal_fistula-in-ano_with_ksharasutra-a_case_study



Efficacy of Ksharasootra in Arsho- Bhagandara (Piles and Fistula-inano) in single sitting-a case study[45]

CASE DESCRIPTION: A 33 year old male patient had complaint of pain-in-ano during defecation, bleeding in drop wise manner per anal verge during defecation, protrusion of piles during defecation which are self-reducible since last one year. The symptom like pain with pus discharge from anterior perianal region was severe since 7 days. There was no previous history of surgery and other illness.

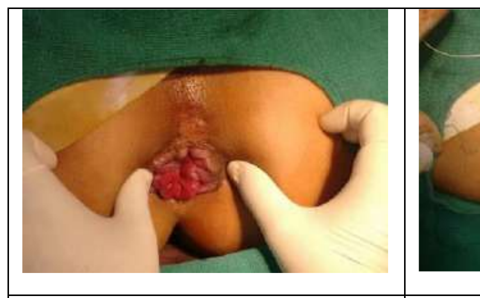
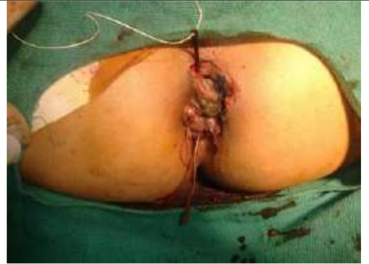
ON EXAMINATION: On inspection external piles at 3 o'clock with bulging at 7 o'clock and 9 o'clock were seen and one external opening at 1 o'clock was noticed. In PR examination sphincter spasm, mild pain with a pit felt at 12 o'clock position was found. In proctoscopy examination, there were 3rd degree intero-external piles at 3, 7 and 9 o'clock positions.

INVESTIGATION: TRUS-23mm long linear non-branching fistulous track was delineated in perianal region with external opening at 12 o'clock position in skin and internal opening at 12 o'clock position just proximal to the anal verge. Routine blood and urine examinations were done and found within normal range.

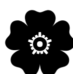
THERAPEUTIC INTERVENTION: Under spinal anaesthesia, with all aseptic precautions, four fingers anal dilation was performed by Lord's procedure. First of all the intero-external pile mass at 3 o'clock was hold by piles holding forceps, and trans fixation and ligation was done at the base of pile's pedicle by *Ksharashootra*. Same procedure was adopted at 7 and 9 o'clock position. External opening at 1 o'clock was made patent with probe, and methylene blue dye was passed until the dye came from 12 o' clock position through anal canal and was simultaneously collected posteriorly up to 4 o'clock position. That collected dye indicates that the cavity of the fistula was big. Probe was passed in posterior direction and the cavity was laid open until the dye was noted. Plain Barbour thread no-20 was applied at 1 o'clock to internal opening at 12 o'clock position. After proper haemostasis was achieved the wound was packed with betadine soaked gauze and T-bandage was applied.

RESULT: On post-operative 5th day, the *Ksharasootra* was twisted. So, necrosed piles sloughed out and fresh wound was observed. On post-operative 21st day the post fistulotomy wound was healed completely without stricture or any complication. Total 2 months were required for complete cutting and healing of fistulous tract. The unit cutting time of fistulous tract case was7.5 days per centimetre.

CONCLUSION: Interno-external piles and fistula can be manage by *Ksharsootra* ligation in pile along with *Ksharsootra* threading and fistulotomy in fistula-in-ano. Post fistulotomy wound healed early due to cleaning and dressing with *Panchavalkal* decoction and ointment respectively.

		
Intero-external piles and external opening at 1 o'clock	**Fistulotomy and Barbour linen in tract with *Ksharasootra* ligated piles**	**Complete healing of wound after two months**

45. Aditya Nema, Dudhamal TS, Gupta SK. Efficacy of *Ksharasootra* in *Arsho- bhagandara* (piles and fistula-in-ano) in single sitting-a case study. European Journal of Biomedical and Pharmaceutical sciences (EJBPS) 2016; 3(3): 442-445. [ISSN : 2349-8870] Impact factor : 3.881 www.ejbps.com
https://www.researchgate.net/publication/297548349_Efficacy_of_Ksharasootra_in_Arsho-_bhagandara_piles_and_fistula-in-ano_in_single_sitting-a_case_study



Partial Fistulectomy, Primary Closure and Ksharasutra Application in the Management of Bhagandara- A Three Dimensional Approach in Single Case[46]

CASE DESCRIPTION: A 60 years old male patient had complaints of peri-anal pain, pus discharge, constipation and itching since last 3 months. He had a vegetarian and spicy diet and was working as a painter. Patient had the history of smoking.

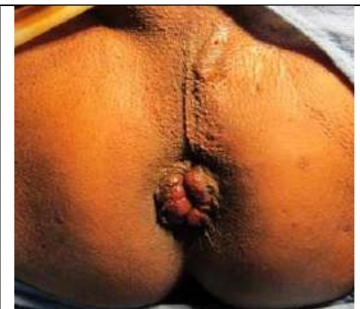
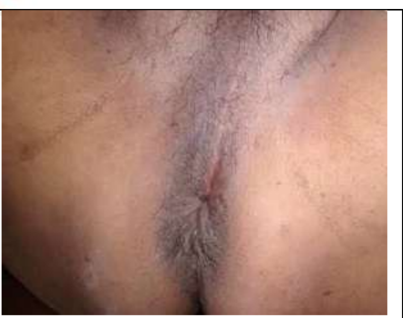
ON EXAMINATION: On inspection, two external opening was observed at 1 o'clock in lithotomy position and 4 cm away from the anal verge.

INVESTIGATION: TRUS - 54 mm long fistula was noted in left perianal region with two external openings at 1 o'clock position in skin and without any internal opening, inner end of fistula abuts left lateral wall of the anal canal at 2 o'clock position. The laboratory investigation for blood, urine, and stool were conducted and found within normal limits.

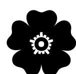
THERAPEUTIC INTERVENTION: Under spinal anaesthesia, with all aseptic precaution, four fingers anal dilation was performed. External opening at 1 o'clock was made patent with probe and methylene blue (dye) was passed then the dye was not come through anal canal, no internal opening was found. Probe was passed and an internal opening was made by it at 12 o'clock position. After that fistulous tract was partially excised up to internal sphincter and wound of partial excision was closed by ethilon 3-0 suture as interrupted suturing then *Ksharasutra* threading was done in rest of fistulous tract.

RESULT: Total **6 weeks** were required for complete cutting and healing of fistulous tract. There was healed scar of primary closer wound, fistulectomy wound and Ksharasutra applied tract. The unit cutting time of fistulous tract case was 7.5 days per cm.

CONCLUSION: Anterior fistula-in-ano can be managed by partial fistulectomy with primary closure and *Ksharasutra* threading, which revealed that the quality of life during treatment has improved in short time period. As it is a single case study so it requires more number of cases for concrete conclusion.

		
1 o'clock fistula-in-ano	Primary closer and *Ksharasutra* in situ	Healed scar after treatment after one and half month

46. Durgesh Nandini, Dudhamal TS. Partial Fistulectomy, Primary Closure and Ksharasutra Application in the Management of Bhagandara- A Three Dimensional Approach in Single Case. Online International Interdisciplinary Research Journal (OIIRJ), Special Issue 6; Sept. 2016: 65-69. [ISSN 2249-9598] Impact factor 3.816. www.oiirj.org
https://www.researchgate.net/publication/308902628_Partial_Fistulectomy_Primary_Closure_and_Ksharasutra_Application_in_the_Management_of_Bhagandara-_A_Three_Dimensional_Approach_in_Single_Case



Pilot study on partial fistulectomy and Shallaki based Ksharasootra in the management of Bhagandara (Fistula-In-Ano)[47]

PURPOSE: To evaluate the effect of partial fistulectomy & *Shallaki KS* in *Bhangadara* management.

MATERIALS AND METHOD:

STUDY DESIGN: An open labelled prospective clinical trial.

SELECTION OF PATIENTS: 15 patients of *Bhagandara* with long track, single branch or multiple branches of fistula-in-ano were included. *Bhagandara* associated with conditions like uncontrolled T.B, uncontrolled hypertension, uncontrolled diabetes mellitus, osteomyelitis, chronic/acute ulcerative colitis, Crohn's diseases were excluded. Carcinoma of ano-rectum & other malignancy, venereal diseases, HBsAg & HIV positive cases and pregnant patients were also excluded from the study.

OPERATIVE PROCEDURE: Under spinal anaesthesia with all aseptic precautions, Probing was done from external opening and internal opening was revealed at anal canal. The excision of the fistulous tract was done from external opening to the level of anal sphincter with help of electric cautery. After that *Shallaki* based *Ksharasootra* was applied in remaining part of the tract.

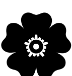
POST-OPERATIVE: From next morning, patients were advised to Sitz bath with *Panchavalkala* decoction and then antiseptic dressing with *Shatadhauta ghrita* and *Matra Basti* with 10ml *Jatyadi Taila* was given daily. 5gm *Eranda Bhrishta Haritaki* powder with luke warm water at bed time was prescribed to relieve constipation. *Ksharasootra* was changed with new ones by rail-road technique on weekly interval till complete healing of fistulous tract was achieved.

RESULT: The relief in symptoms like pain, discharge and swelling showed statistically highly significant results. In case of itching result was found to be statistically insignificant. Complete cutting and healing of fistulous tract occurred within 1.5 month in 7 patients, in 3 patients time required was 2 months, in 2 patients it was 4 months and in 3 patients it was 5 months. All patients cured completely, and during follow up period (after 1 month) recurrence of disease was not noted.

CONCLUSION: Partial fistulectomy & *Shallaki* based *Ksharasootra* in management of *Bhagandara* (fistula-in-ano), showed high efficacy with minimum pain & early healing of fistulous tract.

Shallaki based *Kshara sutra* in situ	After one month	After one and half month	After two month

47. Aditya Nema, Dudhamal TS. Pilot Study on Partial Fistulectomy and Shallaki Based Ksharasootra in the Management of Bhagandara (Fistula-In-Ano). IJAMY (Indian Journal of Ancient Medicine and Yoga 2016;9(4):133-137. (pISSN 0974- 6986, eISSN 0974 – 6994).
https://www.researchgate.net/publication/311851286_Pilot_Study_on_Partial_Fistulectomy_and_Shallaki_Based_Ksharasootra_in_the_Management_of_Bhagandara_Fistula-In-Ano



Transrectal ultra sonography based evidence of Ksharasutra therapy for Fistula-in-ano-a case series[48]

PURPOSE: To evaluate the efficacy of TRUS aided *Ksharasutra* application in fistula-in-ano.

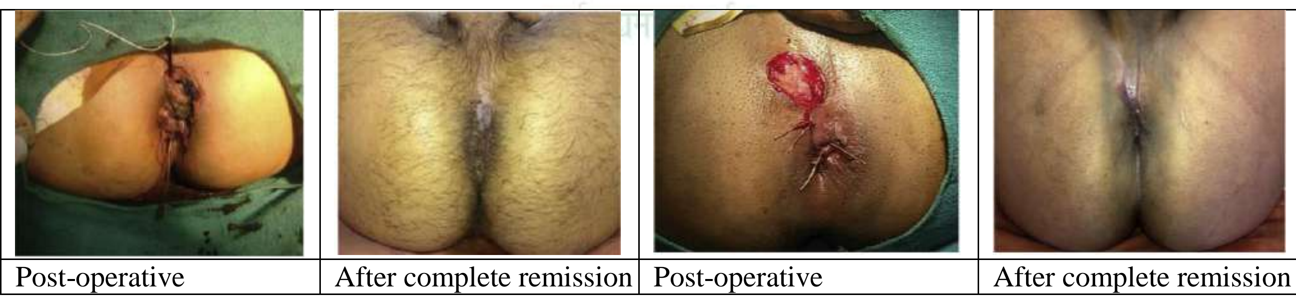
MATERIAL & METHODS:
STUDY DESIGN: An open labelled single armed prospective study on 6 patients of *Bhagandara* (fistula-in-ano).
SELECTION CRITERIA: Patients aged in b/w 20-60 years of diagnosed cases of fistula-in-ano by TRUS method (to know the details of the fistulous tract and related structures before and after the treatment) were included.
EXAMINATION & INVESTIGATION: Routine physical examination and investigations for blood as well as urine examinations were done to determine fitness of patients for surgery. Necessary examinations were done to exclude tuberculosis, hypertension, diabetes mellitus, osteomyelitis, chronic or acute ulcerative colitis, Crohn's disease, malignancy, venereal diseases, Australia antigen and pregnancy in female cases.

OPERATIVE PROCEDURE: Under spinal anesthesia with all aseptic precautions, after performing partial excision of fistulous tract with the help of scalpel and electric cautery, *Ksharasutra* was applied in the remaining part of tract. After achieving hemostasis, sterilized dressing with T-bandage was applied before shifting patient to the ward.

POST-OPERATIVE: Suitable intravenous fluids, antibiotic and analgesic were given in post-operative period for initial 35 days. From next morning, patients were advised to take warm sitz bath with *Panchawalkala Kwatha* for 10 to 15 min, twice a day. Dressing with *Shatdhauta ghrita* was done after instillation of 10 ml *Jatyadi taila* per rectum once daily. *Eranda bhrishta haritaki Churna* 5 gm with lukewarm water at bed time daily was also prescribed.

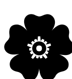
RESULT: On weekly assessment, all patients showed remarkable relief in features of swelling, pain, discharge and itching. Healthy granulation, epithelialization and contraction of wound were observed on every successive weekly assessment. Finally, cut through of *Ksharasutra* followed by complete healing of fistulous tract was observed in all cases. Average UCTH was 7.86 days/cm. All patients underwent TRUS examination in post-treatment period, and all 06 patients were reported either normal or with presence of residual healthy scar tissue or fibrous tissue in place of fistulous tract.

CONCLUSIONS: This case series of six patients had shown remarkable effect of TRUS aided *Ksharasutra* application in *Bhagandara*/fistula-in ano with complete healing of fistulous tract without any obvious complication.



Post-operative	After complete remission	Post-operative	After complete remission

48. Aditya Nema, Gupta SK, Dudhamal TS, Mahanta VD. Trans rectal Ultra Sonography based evidence of Ksharasutra Therapy for Fistula-in-ano- A Case Series. Journal of Ayurved and Integrative Medicine (JAIM). 2017;8:113-121. [ISSN: p-0975-9476 e- 0976-2809] http://elsevier.com/locate/jaim
https://www.researchgate.net/publication/317393600_Transrectal_Ultra_Sonography_based_evidence_of_Ksharasutra_therapy_for_Bhagandara_Fistula-in-ano_-_A_case_series



Partial-fistulectomy and Ksharasutra application in the management of complicated fistula-clinical images[49]

CASE DESCRIPTION: A 27 year old male patient had complaints of swelling in left perianal region and pus discharging sinus near anus since last one and half years. Patient reported history that whenever pus was collected, he felt pain which subsided after drainage of pus. Patient had no history of HTN, DM or any cardiovascular disorders and no significant family history noted.

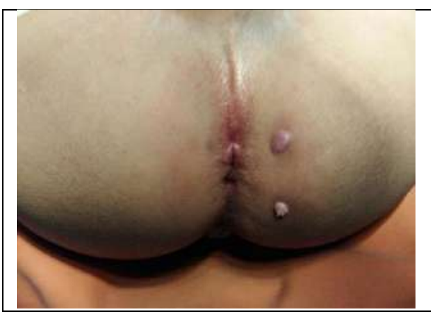
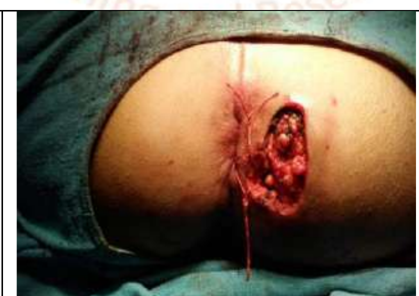
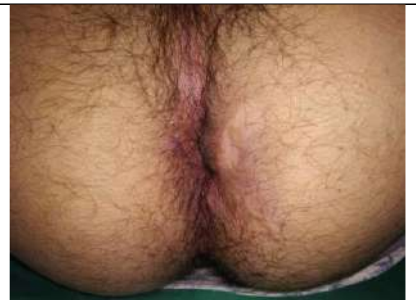
ON EXAMINATION: On inspection, pus discharging sinus with induration was seen at 2 and 4 o'clock position in lithotomy posture. On palpation, induration of whole track and cord like structure felt with two external opening at 2 & 4 o'clock position. During PR digital examination, two internal opening felt radially at 3 and 6 o'clock position at mid dentate line.

INVESTIGATION: TRUS report showed 6 cm long fistula with external opening at 4 o' clock position and internal opening at 5 o' clock position. A 2.8cm long branch was seen arising from mid part of the fistula with external opening at 2 o' clock position.

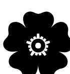
HB: 12.4g/dL, RBC: 6.50 mill/cmm, WBC: 3700/cmm, N/L/E/M/B: 50/45/05/03/00 Platelet: 170000/cmm BT: 1.25 min. CT: 3.45 min. RBS: 75 mg/dl HIV & HBsAg: Negative

THERAPEUTIC INTERVENTION: Under spinal anesthesia, with all aseptic precautions, methylene dye was passed through one external opening to identify the course of track during procedure. Probing was done and coring of complete fistulous tract was done up to sphincter. After partial fistulectomy the *Ksharasutra* was applied in reaming tract (3 to 3 o' clock and 4 to 6 o' clock) to preserve the sphincter. Post-operative IV fluids (2 days), antibiotics & analgesic (7 days), and multivitamins (2 months) were given. Along with this sitz bath with *Panchavalkal* (daily), laxative (at night) and dressing with *Jatyadi Taila* (daily once) and *Ksharasutra* change (weekly once) was done till complete recovery. The post-operative progress was well that is wound healing was going normally and cutting of remaining tract was 0.5 cm weekly.

RESULT: Follow up was done after one and half year and there was no recurrence.

		
Pre Op.	Post-operative on table two *Ksarasutra* in situ	Follow up after one and half year with small scar

49. Shah B, Dudhamal TS. Partial-fistulectomy and *Ksharasutra* application in the management of complicated fistula - Clinical images. Int. J AYUSH CaRe. 2017;1(1): 32-36. [ISSN: e 2457-0443]. www.ijacare.in https://www.researchgate.net/publication/320880323_Partial-fistulectomy_and_Ksharasutra_application_in_the_management_of_complicated_fistula-Clinical_images



Effect of partial fistulectomy with Ksharasootra application in the management of Bhagandara (fistula-in-ano)-a case report[50]

CASE DESCRIPTION: A 40 year old male patient had complaints of pus discharge and itching since 15 days with peri-anal pain since last one month. He was working as a manager in a private company with a vegetarian diet. Patient had no history of addiction, hypertension, diabetes mellitus, tuberculosis and any drug reaction. He was operated for the same fistula in Mumbai 6 years back.

ON EXAMINATION: One external opening was observed at 11 o' clock about 5 cm away from the anal verge anteriorly with normal peripheral skin.

INVESTIGATION: The routine laboratory investigation for blood, urine, and stool were conducted, and found within normal limits.

TRUS- 60 mm long fistula was noted in right perianal region with one external opening at 11 o'clock position in skin extended to nearby scrotum and one internal opening at 11 o'clock at level of dentate line too. Chest X-ray and USG of whole abdomen were done, and no abnormality detected.

THERAPEUTIC INTERVENTION: Under spinal anesthesia, with all aseptic precaution, patency test was done by betadine and hydrogen peroxide solution with 5 ml syringe from external opening, & was found to be positive. Probing was done from external opening and internal opening, & was revealed at anal canal. The excision of the fistulous tract by coring method was done from external opening till external anal sphincter with the help of blade no.15 as well as electric cautery. After proper hemostasis wound was packed with betadine gauze and T-Bandage applied.

RESULT: On post-operative 5th week, the wound became cleaned, and healing was promoted with healthy granulation tissue. Total 10 weeks were required for complete cutting and healing of fistulous tract. The unit cutting time (UCT) of fistulous tract case was 6 days per cm.

CONCLUSION: Early healing without any anal incontinence in partial fistulectomy with *Ksharsutra* application in the management of fistula-in-ano was seen from this case. Hence, its wide applicability needs further evaluation.

AFTER 1st POST-OPERATIVE DAY	AFTER 3rd WEEK	HEALED SCAR AFTER 10th WEEK

50. Khiradi B, Shah B, Dudhamal TS, Bhadja M. Effect of partial fistulectomy with ksharasootra application in the management of bhagandara (fistula-in-ano) - A case report. International Journal of Pharmaceutical Sciences and Research IJPSR, 2017; 8(11): 4904-4908. [ISSN: e-0975-8232; p- 2320-5148]. www.ijpsr.com https://www.researchgate.net/publication/320880145_EFFECT_OF_PARTIAL_FISTULECTOMY_WITH_KSHARASOOTRA_APPLICATION_IN_THE_MANAGEMENT_OF_BHAGANDARA_FISTULA-IN-ANO-A_CASE_REPORT

An integrated approach in the management of complex posterior horse shoe fistula-in-ano[51]

CASE DESCRIPTION: A 45 year old male patient had complaints of intermittent fever since last 67 months with swelling & pus discharge from perianal region for 3 months, and perianal pain for one and half month. Patient underwent incision and drainage 3 months back. Patient was labourer by profession and was used to consume non-vegetarian diet, spicy foods and tobacco.

ON EXAMINATION: In lithotomy position, two external opening at 5 and 7 o'clock and a common internal opening at 6 o'clock position were found. Fibrosed band could be palpated from 5 to 7 o'clock position.

INVESTIGATIONS: Routine blood and urine examinations were done and found within normal range. Pus culture was done to know the presence of microorganism, and it was found that it had E.coli in abundance. As per TRUS report: 10cm long "Horse shoe" shaped fistula in perianal region with external opening at 5 and 7 o'clock and internal opening at 6 o'clock,10mm from anal verge, 20 mm and 28 mm long blind branch at 5 and 7 o'clock respectively.

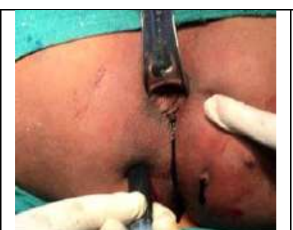
THERAPEUTIC INTERVENTION:

1st stage surgery: Under Spinal anaesthesia with all the aseptic precaution, patency test was done using methylene blue, which was seen coming out from external opening at 5 o'clock and internal opening at 6 o'clock. Incision was taken at around 3 cm from anal verge at 6 o'clock which was increased laterally on both sides, using straight artery forceps tough fibrosed band felt by fingers was dilated and intersphincteric space was exposed. The artery forcep was then taken out though the internal opening and a *Ksharsutra* was placed in situ. A probe was passed from external opening at 5 o'clock which was taken out from the window made at 6 o'clock. Partial fistulectomy was done and *Ksharsutra* was kept in situ external to external (5-6 o' clock), similarly on 7 o'clock partial fistulectomy was done and a *Ksharsutra* was placed external to external (7-6 o' clock).

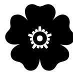
2nd stage surgery: After 12 weeks, fistulotomy was done at 6 and 7 o'clock, *Ksharsutra* was left in situ at 5 o'clock.

RESULT: Postoperative wound healed within 6 months completely with minimal scar. Sphincteric tone was within normal limit with maintenance of normal faeces and flatus continence.

CONCLUSION: Partial fistulectomy with window technique and *Ksharsutra* application is a minimal invasive integrated approach for the management of complex horse shoe fistula-in-ano which needs further evaluation.

			
Pre-Operative Patency test	First stage surgery post-operative	Second stage surgery after 12 weeks	Healed scar after 6 months

51. Monica Shrestha, Dudhamal TS. An Integrated Approach in the Management of Complex Posterior Horse Shoe Fistula-in-Ano. IJAMY (Indian Journal of Ancient Medicine and Yoga 2017;10(4):153-157 [pISSN 0974-6986, eISSN 0974-6994). www.rfppl.com
https://www.researchgate.net/publication/322722018_An_Integrated_Approach_in_the_Management_of_Complex_Posterior_Horse_Shoe_Fistula-in-Ano



Management of low anal fistula by Chedana and Ksharkarma-a case study and review of literature research article[52]

CASE DESCRIPTION: A 43 year old male patient had complaints of throbbing pain-in-ano, swelling and fever with chills from last six months. By profession he was an electrician, and had a history of incision and drainage for perianal abscess two years back.

ON EXAMINATION: External opening was seen at 11 o'clock approximately 4 cm from anal verge with abscess. On digital examination internal opening was felt at 11 o'clock.

INVESTIGATION: As per TRUS report, there was a thin track extension (5 mm thickness) of abscess medially and reaches inter-sphincteric space at 11 o'clock position with further superior extension at 11 o'clock position. Internal opening was at 11 o'clock (length from anal verge 15 mm).

Routine blood and urine examinations were done and found within normal range.

THERAPEUTIC INTERVENTION: Under spinal anesthesia, with all aseptic condition, patency test was done using methylene blue, which was seen coming out from internal opening at 11 o'clock. Then probing was done with probe from external opening at 11 o'clock external. The tract was excised (*Chedana*) and *Teekshna Apamarga Kshara* was applied then covered by a gauze piece and left for approximately 30 seconds, later flushed with lemon juice followed by normal saline. At 12 o'clock position chronic fissure tag was seen, tag was excised.

RESULT: On 4th week wound was healthy and contracted. The wound healed completely within one and half month with minimal scar formation and normal skin coloration.

CONCLUSION: *Chedana* (fistulectomy) followed by *Kshara Karma* is one of the option for management of low anal fistula-in ano.

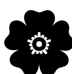
Fig 1:- Pre-operative

Fig 2:- Post-operative

Fig 3:-Post-operative 4th week

Fig 4:- Healed within 6 weeks

52. Patel PR, Shreshtha M, Dudhamal TS. Management of low anal fistula by Chedana and Ksharakaram-A cse Study and review of literature International Journal of Ayurved Medicine (IJAM) 2018;9(2):133-135. [ISSN: 0976-5921] http://ijam.co.in https://www.researchgate.net/publication/326881931_Management_of_Low_Anal_Fistula_by_Chedana_and_K_sharkarma_A_Case_Study_and_Review_of_Literature



Post of fistula-in-ano through Ayurveda: clinical images[53]

CASE DESCRIPTION:

FIRST CASE: A female patient of 48 years, had complaints of discharge per ano and pain in ano since 1 year.

SECOND CASE: A male patient of 51 years, had complaints of pain in anal region, pus discharge from the opening site & constipation since 7 months. He was diagnosed as fistula-in-ano (*Bhagandara*).

ON EXAMINATION:

FIRST CASE: On inspection, an external opening was observed at 5 o'clock position in lithotomy position 3 cm away from anal verge. No history of any other disease noted. She was diagnosed as fistula-in-ano.

SECOND CASE: On inspection, an external opening was observed at 9 o'clock and 11 o'clock in lithotomy position, 2.8 cm away from anal verge.

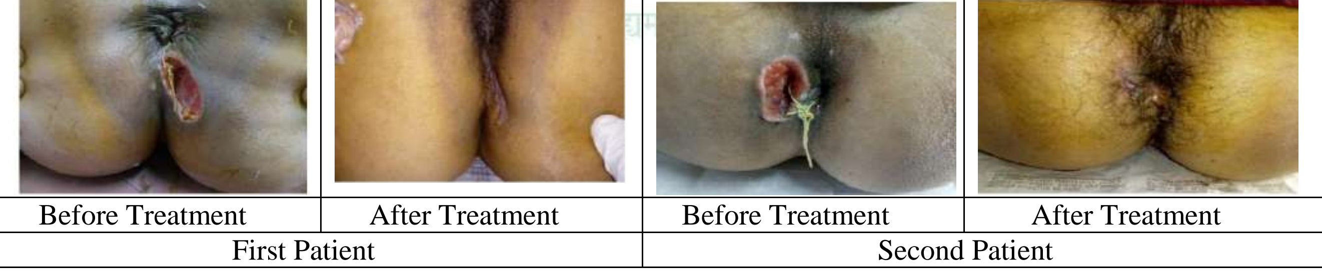
INVESTIGATION: Laboratory investigation, urine routine and microscopic examination (only before Treatment) were done and found normal. Fistulogram of both patients were done.

THERAPEUTIC INTERVENTION:

Under spinal anesthesia, cavity was laid open and partial fistulectomy done and *Apamarga Ksharsutra* was applied in the remaining part of fistulous track. Wound pack with betadine soaked gauze, and T-bandage was applied. Appropriate antibiotics and analgesic were given for 5 days. After that wound was rinsed with *Panchavalkal Kwath* and local application of *Panchavalkal* ointment was done. The dressing was done once in a day and repeated up to 28 days with the similar procedure.

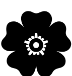
RESULT: Complete remission of first patient was achieved within 2 months, whereas second patient achieved complete remission within 2 ½ months.

CONCLUSION: The study shows that *Panchavalkal* ointment can effectively control infection and enhance wound healing process in the post-operative fistulectomy cases.



Before Treatment	After Treatment	Before Treatment	After Treatment
First Patient		Second Patient	

53. Dhurve V. Dudhamal TS. Post of fistula in ano through Ayurveda: Clinical Images. International Journal of Research in Ayurveda Pharmacy (IJRAP). 2018;9(4):1-3. [ISSN 2229-3566] www.ijrap.net https://www.researchgate.net/publication/327536462_POST_OF_FISTULA_IN_ANO_THROUGH_AYURVEDA_CLINICAL_IMAGES



Management of recurrent, complex, and high anal horseshoe fistula-in-ano by partial fistulectomy with Ksharsutra: a case report[54]

CASE DESCRIPTION: A 32-year-old male patient had complaints of pus discharge from perianal region, pain in ano and intermittent fever. He reported a history of surgery for fistula-in-ano and a Seton was inserted a year ago. While undergoing treatment, the patient again developed a perianal abscess and was operated for the same 7 months ago but post-operative wound did not heal and he had a Seton in situ. So, the patient wanted Ayurvedic management for his condition as the pus discharge did not stop even after undergoing surgery. The patient was in continuous pain in and around the anal region which hampered his routine work & ultimately his QOL. The patient had no other medical or surgical illness.

ON EXAMINATION: A Seton was seen at 6 o'clock position and a scar was seen at 2 o'clock position. On digital rectal examination, the big internal opening was felt at 6 o'clock position and high anal extension was felt at 3 o'clock position. The two tracts (3–6 o'clock and 7–6 o'clock) communicated with each other and this was clinically diagnosed as a case of horseshoe fistula.

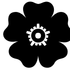
INVESTIGATION: TRUS showed 68 mm long linear non-branching fistula in the left perianal region with an external opening at 3 o'clock and internal at 6 o'clock position. The internal opening was 12 mm proximal to the anus. Nineteen-millimeter-long linear non branching fistula in the right perianal region with an external opening at 7 o'clock was also seen. Internally, the fistula communicated with the above-mentioned fistula. All the hematological and biochemical examination were done before planning surgery and were within the normal limit.

THERAPEUTIC INTERVENTION: Under spinal anesthesia with all aseptic precaution, probe was passed through 3 o'clock which came out from internal opening at 6 o'clock. Partial fistulectomy was done and *Ksharsutra* was inserted in the remaining tract and the high anal extension was scooped, the probe was passed through the external opening at 6–7 o'clock which came out through the internal opening at 6 o'clock, *Ksharsutra* was inserted in this tract also.

RESULT: On 14th week, both the *Ksharsutra* had cut through. On 20th week, wound healed completely, there was no pain and pus discharge. Sphincter tone was within normal limit, and no evidence of fistula-in-ano clinically.

Pre-operative image	Post-operative 3rd week	Post-operative 20th week

54. Shreshtha M, Dudhamal TS. Management of recurrent, complex, and high anal horseshoe fistula-in-ano by partial fistulectomy with Ksharsutra: a case report. European Journal of Medical Case Reports (EJMCR). 2018; 2(3):117–120.[e-ISSN-2520-4998]. www.ejmcr.com www.discoverpublish.com https://www.researchgate.net/publication/328522312_Management_of_recurrent_complex_and_high_anal_horseshoe_fistula-in-ano_by_partial_fistulectomy_with_Ksharsutra_a_case_report



Comparative clinical study of Guggulu-based Ksharasutra in Bhagandara (fistula-in-ano) with or without partial fistulectomy[55]

PURPOSE: To compare the efficacy of *Guggulu* based *Ksharasutra* with or without fistulectomy in fistula-in-ano cases.

MATERIAL AND METHODS:
STUDY DESIGN: An open labelled randomized clinical trial with 42 diagnosed cases of *Bhagandara*.

DIAGNOSTIC CRITERIA: The diagnosis was made on the basis of symptoms such as boil at perianal region, pus discharge and perianal pain. Per anal examination findings revealed external opening, and per rectal digital examination confirmed internal opening of fistula-in-ano.

INCLUSION CRITERIA: Patients aged b/w 20-60 years diagnosed with *Vataja Bhagandara (Shataponaka), Pittaja Bhagandara (Ushtragreva), Kaphaja Bhagandara (Parisravi), Vata-Pittaja Bhagandara (Parikshepi), Vata-KaphajaBhagandara (Riju)* and *ArshoBhagandara [(Kapha-Pittaja)* (piles fistula)], *Bhagandara* with *Parikartika* (fistula-in-ano with fissure-in-ano) and all types of low anal fistula (length 2–10 cm) were included.

BLOOD INVESTIGATIONS: Hb, blood sugar, renal function test, liver function test, venereal disease research laboratory (VDRL), HIV & Australia antigen (HBsAg) test were done.

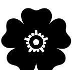
RADIOLOGICAL INVESTIGATIONS: TRUS and X-ray chest (postero-anterior view) to rule out pulmonary tuberculosis. Other examinations like urine and stool routine and microscopic examinations were done in all patients. The biopsy of the tissue of the fistulous tract was done in suspected cases of malignancy.

METHODOLOGY:
Group-A (n=22): Treated with application of *Guggulu* based *Ksharasutra* under spinal anesthesia.
Group-B (n=20): Treated with application of *Guggulu* based *Ksharasutra* along with partial fistulectomy under spinal anesthesia.

RESULTS:
Group-A (n = 22): provided highly significant relief in pain and discharge, and significant result was found in perianal itching, whereas relief in swelling of the affected area was statistically insignificant.
Group-B (n = 20): provided relief in symptoms such as pain, discharge and itching, which was statistically highly significant.
In group-A, mean UCT was 8.85 days/cm, and in group-B, mean UCT was 8.19 days/cm.

CONCLUSION: *Guggulu*-based *Ksharasutra* was effective in curing *Bhagandara*. However, on the prospects of relief in complaints and reducing the UCT group-B was better than group-A. The adjuvant drugs prescribed during the treatment that is sitz bath with *Panchavalkala* decoction, *Jatyadi* oil, *Triphala Guggulu*, *Haritaki* and *Saindhav* also played significant role in symptomatic relief. No recurrence was observed in any patient during follow-up of 1 month after complete cut through of fistulous tract. However, follow up for one year is recommended for further validation.

55. Meena RK, Dudhamal TS, Gupta SK, Mahanta V. Comparative clinical study of Guggulubased Ksharasutra in Bhagandara (fistula-in-ano) with or without partial fistulectomy. AYU 2018;39:2-8. [ISSN: p-0974-8520 e-0976-9382] www.ayujournal.com.
https://www.researchgate.net/publication/329367492_Comparative_clinical_study_of_Guggulu-based_Ksharasutra_in_Bhagandara_fistula-in-ano_with_or_without_partial_fistulectomy



Integrated approach for the management of Satponaka Bhagandara (anterior horseshoe fistula with multiple openings)-a case report[56]

CASE DESCRIPTION: A 47 year old male patient had complaints of 6 to 7 boil at perianal region since last two years, and pus discharge from the boils for last 6 months. Patient reported that there was throbbing pain after collection of pus, and pain subsided once the boil bursts and pus is discharged. There is recurrence of this complain for the past 2 years.

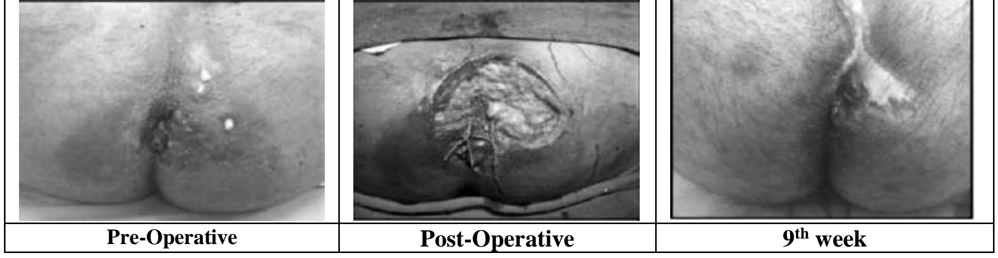
ON EXAMINATION: At 1 o'clock position, there were two external openings approximately 6 cm and 7cm from anal verge respectively, two external openings at 3 o'clock approximately 1 cm and 6 cm from anal verge respectively. At 5 o'clock one external opening was seen approximately 1cm from anal verge. One opening each at 9 o'clock and 10 o'clock position approximately 1 cm from anal verge was found respectively. On per-rectal examination, internal opening felt at 12 o'clock position. After probing it was found that the tract of 3 o'clock position and 1 o'clock position both were connected to the 12 o'clock position.

INVESTIGATION: TRUS report showed 6 to 7 cm long irregular shaped multiple-branching fistula in left peri anal region with multiple external openings between 12 to 3 o'clock position, and one internal opening at 12 o 'clock position. Internal opening is 7 cm proximal to anus. 47 mm long blind branch arising from inner end of the fistula and are extending at 11 o'clock position in right peri-anal region. MRI showed multiple branching sinus tracks with abscess formation in subcutaneous plane of left gluteal region (grade I) & inter sphincteric sinus track in right gluteal region.

THERAPEUTIC INTERVENTION: Under spinal anesthesia, with all aseptic precautions, Methylene blue dye was pushed in track at 3 o'clock, it came out from multiple external openings at 1, 3, 7, 9 and 11 o'clock and internal at 12 o'clock in anal canal. All external fistulous tracks were partially cored and *Ksharsootra* was inserted in rest of the track at 1 o'clock (external opening) to 12 o'clock (internal opening) and at 12 o'clock (external opening) to 12 o'clock (internal opening), and both ends of *Ksharsootra* were tied loosely. Proper hemostasis was achieved, betadine soaked pack was kept in anal canal and T-Bandaging was done.

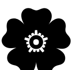
RESULT: On seventh week, post-operative assessment showed *Ksharsootra* got cut through and wound size was 8.28cm^2. Wound healed completely by 9th week.

CONCLUSION: Long enough anterior horse shoe fistula-in-ano with multiple openings can be managed by partial fistulectomy and *Apamarga* based *Ksharasootra* along with the adjuvant drugs like *Thumari oil* and *Apmarga Kshara.*



Pre-Operative	Post-Operative	9th week

56. Nakarani HL, Shrestha M, Dudhamal TS. Integrated Approach for the management of Satponaka Bhagandara (Anterior Horseshoe Fistula with multiple openings) -A Case Report. Annals of Ayurvedic Medicine (AAM) 2018;7(3-4):109-113. [ISSN: p-2277-4092, e-2347-6923] www.scopemed.org or www.ejmanager.com/aam https://www.aamjournal.in/?term=Integrated+Approach+for+the+management+of+Satponaka+Bhagandara+%28Anterior+Horseshoe+Fistula+with+multiple+openings%29+-A+Case+Report.+&sarea=



Clinical efficacy of fistulotomy followed by Ksharkarma in the management of low anal fistula-a case series[57]

CASE PRESENTATION: 5diagnosed cases of low anal fistula were selected for study having complaints of pain in ano, boil at ano & pus discharge at ano.

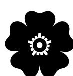
INVESTIGATION: All routine pre-operative blood investigation with serology were done for all patients and found within normal limit. Chest X-ray was also carried out for pre-operative check-up. TRUS was also done to confirm diagnosis.

OPERATIVE PROCEDURE: Under spinal anesthesia or local anesthesia, in lithotomy position painting and draping done. First patency test was done by pushing methyl blue dye through external opening to locate the direction and cavity of fistula. Then lubricated index finger was introduced gently into the anal canal and with other hand a lubricated probe was introduced through the external opening of the fistula. The index finger inside the anus guided the probe. The probe was progressed towards the internal opening. Forceful probing was avoided. After reaching the internal opening, the tip of the probe was brought out through the anal canal. The tract was lay open (fistulotomy) and the wound edges were trimmed, than *Tikshna Apamarga Kshara (Ksharkarma)* was applied & covered by gauze piece and left for approximately 30 seconds. Later fistulotomy wound was flushed with lemon juice followed by normal saline to remove the *Kshara*.

RESULT: In all the cases of fistulotomy followed by *Ksharkarma* (local application of *Tikshna Apamarga Kshara*), the wound was assessed weekly and it was observed that pain, discharges and swelling reduced; and healthy granulation was observed. Average days taken for wound healing were 6.2 weeks. Average unit healing time was 8.41 days per cm.

CONCLUSION: In fistulotomy and *Ksharkarma*, post-operative wound healed earlier & without recurrence. So, this method can be promoted as an alternative to surgical interventions for the management of low anal fistula.

57. Shrestha M, Dudhamal TS. Clinical Efficacy of Fistulotomy Followed By Ksharkarma in the Management of Low Anal Fistula - A Case Series. International Ayurvedic Medical Journal 2018; 7(1): 166-70. [ISSN: e 2320 5091] www.iamj.in.
http://www.iamj.in/images/upload/166_170.pdf



Management of complex fistula-in-ano by an IFTAK technique[58]

CASE DESCRIPTION: The patient was apparently asymptomatic before 15 years but then a boil developed at perianal region which spontaneously busted and pus discharge was seen coming out from the boil. He took some medicines then and got symptomatic relief. But a month back he had severe pain at perianal region, again a boil developed which busted and there was gross pus discharge, he had fever too. He visited some general surgeon and he was suggested to undergo fistulectomy and colostomy.

ON EXAMINATION: The local examination revealed an external opening at 10 and 11 o’clock over perianal region. Induration was felt between 11 to 6 o’clock. Per rectal examination revealed an internal opening between 5 to 6 o’clock and firm bulges at 4 0’clock and 8 o’clock around 2 cm above the dentate line. MRI showed internal opening at 5 o’clock position just above the anal verge. Tract was seen going posterior and gave rise to ramifications within intersphincteric region in horseshoe pattern which travelled inferiorly and posterior within right side of gluteal region with external opening within right side of gluteal region at 10 o’clock position. From left side intersphincteric ramification left side and upwards just above the level of levator ani. Maximum length of tract was 7 mm & width 9 mm. Left side upwards transversing tract measures 20mm. Grade 5 St. James’s University hospital classification of perianal fistulae. All the investigations were found within normal limit.

THERAPEUTIC INTERVENTION: Under aseptic precautions, methylene blue was pushed through the external opening at 11 o’clock and dye was seen coming out from internal opening at 6 o’clock. (Patency test) Probing was done through external opening at 11 o’clock which was felt coming towards 6 o’clock. Elliptical incision was taken including both the external openings. The track was cored and two branches of tract was visualized, one went towards 6 o’clock and other towards rectum. The tract going towards 6 o’clock was partially excised and in the rest of tract *Ksharsutra* was tied. A window was made at 6 o’clock approximately 2 cm from verge, the intersphincteric tract was visualized and *Ksharsutra* was tied 6 to 6 o’clock. The tract going towards 5 o’clock was scooped well and the wound was packed for hemostasis.

RESULT: On 12th week, *Ksharsutra* got cut through and wound healed completely.

CONCLUSION: This study shows that complex fistulas can be treated by integrated approaches.

Pre-operative	Post-operative Day 1	Post-operative 9th week	Post-operative 12th week

58. Shrestha M, Dudhamal TS. Management of complex fistula-in –ano by IFTAK technique. The Healer Journal, 2021;2 (1):1-9. [e ISSN : 2738-9634 p-ISSN: 2738-9863] www.thehealerjournal.org

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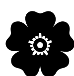


Management of recurrent horseshoe fistula-in-ano by Ksharasutra[59]

CASE DESCRIPTION: A 60-year-old male had complaints of recurrent boils in the perianal region for 1 year. He also had associated complaint of fever during the collection of pus followed by its remission upon spontaneous bursting of an abscess. He had past surgical history of incision and drainage of perianal boils in 2001 and 2015.

ON EXAMINATION: The external openings were at 10 o'clock, 7 o'clock, and two openings at 4 o'clock. On digital rectal examination, a single internal opening was palpated at 6 o'clock, and clinically it was diagnosed as a case of horseshoe fistula-in-ano.

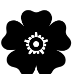
INVESTIGATION: TRUS-11 to 12 cm horseshoe-shaped branching fistula, seen in the perianal region with one external opening at 10'clock position, another at 7 o'clock position, another two external opening at 4 o'clock position, and one internal opening at 6 o'clock position. The maximum depth of the fistula at 6 o'clock position is 9 mm. One internal opening is 10mm proximal to the anal verge.

THERAPEUTIC INTERVENTION: Under spinal anesthesia, with all aseptic precaution, the primary opening was confirmed by injecting methylene blue dye from the external opening which came out from the internal opening at 6 o'clock. Retrograde probing was done from the internal opening at 6 o'clock and a window was created at the inter-sphincteric plane posteriorly followed by *Ksharasutra* threading for drainage of the primary crypt. Then, the probe was inserted from the external opening at 4 o'clock and the whole tract was excised along with its ramification using coring technique up to the midline posteriorly. Similarly, probing was done from 10 o'clock and partial fistulectomy was performed. *Ksharasutra* threading was done from 8 to 6 o'clock.

RESULT: The right external fistulous tract (8 to 6 o'clock) got cut through on the 43rd post-operative day. The *Ksharasutra* at 6 to 6 o'clock was kept loose after changing to provide adequate drainage until the external tract was cut through completely. This fistulous tract got cut through on the 55th post-operative day. The wound was completely healed on the 68th post-operative day.

CONCLUSION: Recurrent horseshoe fistula can be well treated with *Ksharasutra* without recurrence.

59. Dudhamal TS, Shailley Maurya. Management of Recurrent Horseshoe Fistula-in-ano by Ksharasutra. Indian J Ancien Med Yog. 2021;14(1): 29–33. [p-ISSN 0974- 6986, e-ISSN 0974 - 6994]. www.rfppl.co.in
https://www.researchgate.net/publication/360625466_Management_of_Recurrent_Horseshoe_Fistula-in-ano_by_Ksharasutra



Two-staged surgical approach along with Ksharasutra therapy in the management of complex, non-specific, posterior horse-shoe-shaped fistula-in-ano: a case report[60]

CASE DESCRIPTION: A 28-year-old businessman without any addictions had complaints of painful swelling with pus discharge in the right perianal region & throbbing pain in ano for four days.

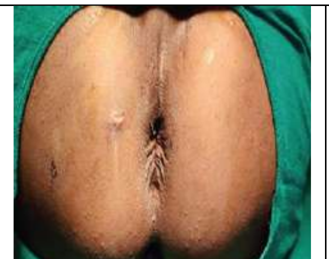
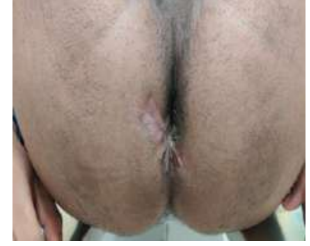
ON EXAMINATION: Swelling with pus discharge was found in right perianal region at 10 o'clock. The internal opening was felt near dentate line at 6 o'clock position and induration was felt from 5 to 9 o'clock position with normal sphincter tone.

INVESTIGATION: TRUS-10–11 cm long fistula in right perianal region with external opening at 10 o'clock position and internal opening at 6 o'clock position. Internal opening was 13 mm proximal to anal verge. 44 mm long two wide calibered (12–15 mm) blind branches are seen at 5 o'clock region 10 mm deep to perianal skin. 40 mm long another blind branch is seen along left lateral wall extending up to 2 o'clock region, 14 mm deep to perianal skin. Maximum width of the fistula at 6 o'clock position is 10 mm. Maximum depth of the fistula at 7 o'clock position is 12 mm. All the hematological and biochemical examinations were done before planning surgery and were found within the normal limits.

THERAPEUTIC INTERVENTION: Probe was passed through external opening at 10 o'clock to know the depth and direction of the track. After identifying the course of the track, it was laid open, drained, and high anal extension was scooped. Left-sided perianal region's external opening was not found, but, on digital rectal examination, collection was felt so opening was made at perineal region posterior to the anal opening at 6 o'clock position for draining of both the tracks and *Apamarga Ksharasutra* was placed.

RESULT: After nine weeks of treatment, both *Ksharasutra* was cut through, and wound was healed partially. After 13 weeks of treatment, postoperative wound was healed completely. The patient was followed up for the next three months, and no signs of recurrence or complications were noted.

CONCLUSION: It is difficult to conclude that two-staged surgical approach along with *Ksharasutra* will always be beneficial for complex, posterior, trans-sphincteric, horseshoe-shaped fistula-in-ano or not. However, in the present case the results were encouraging. It was managed, without any complications or fecal incontinence at minimal cost. No complications nor recurrences were noticed during the follow-up period.

			
Pre-operative image	Post-operative third day image	Second staged post-operative image after two weeks of First surgery	Completely healed wound after 13 weeks

60. Baria PB, Dudhamal TS. Two-staged surgical approach along with Ksharasutra therapy in the management of complex, non-specific, posterior, horse-shoe-shaped fistula-in-ano: A case report. J Ayurveda Case Rep 2021;4:58-63. [p-ISSN-2667-0593, e-ISSN-2667-0607] www.ayucare.org

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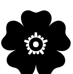


Partial fistulectomy and Ksharsutra in complex anterior horseshoe fistula-a case report[61]

CASE DESCRIPTION: A 21year old female patient had complaints of multiple boils at perianal region with pain and blood mixed pus discharge since two months. Symptoms got aggravated during prolong sitting or walking, and was relieved after taking analgesic medications. No relevant medical or family history was found.

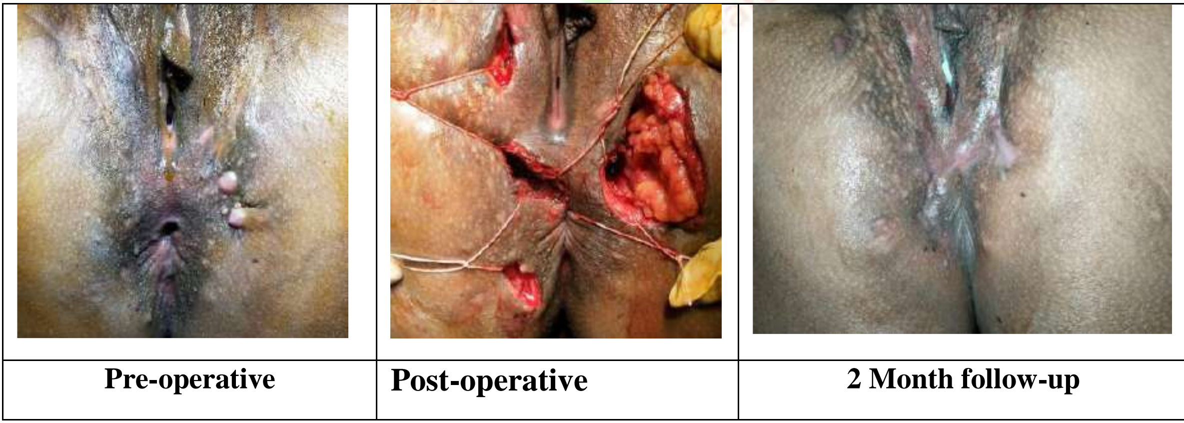
ON EXAMINATION: Multiple external openings present anteriorly between 2 to 10 o'clock, & on DRE internal opening felt at 12 o'clock. The findings of TRUS suggestive of 15 cm long and 10 mm wide horseshoe fistula in perianal region, with multiple external openings on both side between 2 to 9 o'clock, and one internal opening at 12 o'clock.

OPERATIVE PROCEDURE: Under spinal anaesthesia with all aseptic precautions, patency test was done with betadine solution 10% with H_2O_2 solution from external opening at 1 o'clock which came out from internal opening at 12 o'clock. A long metallic malleable probe with an eye was introduced through the external opening at 1 o'clock and attempted to pass the tip of probe through the internal opening at 12 o'clock. Care was taken not to create false passage. The fistulous tract along with unhealthy tissue surrounding external opening curetted till the fibers of external sphincter are reached. The eye of the probe was threaded with *Ksharasutra* and probe was gently withdrawn, so the entire tract was threaded with medicated *Ksharasutra*. Following which the two ends of the thread were snugly tied using two knots outside the anal canal. Similar procedure done for all secondary extensions. Proper haemostasis was achieved and wound was packed with gauze pieces soaked with betadine solution.

POST-OPERATIVE: Patient was advised to take daily sitz bath with *Panchavalkala Kwatha* followed by aseptic dressing with *Panchavalkal Malhara,* and orally 1gm *Triphala Guggulu* was given thrice in a day with lukewarm water after meal for two months. *Ksharasutra* was changed on weekly interval by railroad technic.

RESULT: On 54th post-operative day, wound was healed completely. On the follow up after 2 months, there was a minimal scar present at the wound site without any sign of recurrence of the disease.

CONCLUSION: Ayurveda can offer cost effective and minimal invasive parasurgical managements, which helps in improvement of the quality of life of patient, with no recurrence of the disease and without complications. As this is a single case report, it require more studies on such cases for further evaluation.



Pre-operative	Post-operative	2 Month follow-up

61. Yadav, R., Bhalara, B., & Dudhamal, T. (2024, March 20). Partial Fistulectomy and Ksharsutra in Complex Anterior Horseshoe Fistula-in-Ano - A Case Report. *International Journal of AYUSH Case Reports*, *8*(1), 10-15.

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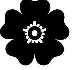

Clinical study of Kutaja and Palasha Kshara in the management of *Arsha*[62]

PURPOSE: This study aimed to compare the efficacy of local application of *Kutaja* & *Palasha Kshara* in the management of *Arsha*.

MATERIAL AND METHODS:

STUDY DESIGN: In this randomized, controlled, single center clinical trial 20 *Arsha* (piles) patients were randomly selected irrespective of age, sex, religion, education, etc. and divided into group I (*Palasha Kshara Pratisarana*) and group II (*Kutaja Kshara Pratisarana*). Group I was treated with *Pratisarana* (local application) of *Palasha Kshara*, and group II with *Kutaja Kshara* once per day for maximum up to 7 days.

DIAGNOSTIC CRITERIA: Patients suffering from sign & symptoms of *Arsha* (1st, 2nd and 3rd degree haemorrhoids) were included in the study and local per rectal & proctoscopic examination were conducted to confirm the site, position, prolapse, size and shape of pile mass. After the selection, to assess the general condition of the patient pathological investigation viz. haemogram, blood sugar, routine urine & stool examination were done.

INCLUSION CRITERIA: Patients presenting with complaints of *Arsha* viz. bleeding per rectum, prolapse of pile & pain.

EXCLUSION CRITERIA: Cases of carcinoma of rectum & metabolic disorders like hypertension, diabetes mellitus, and cardiac disease were excluded.

PROCEDURE: After positioning the patient in lithotomy position, painting and draping of the operative site was done. A slit proctoscope lubricated with Xylocaine jelly was introduced into the anal canal and pile mass was identified. After cleaning the mass with gauze, Kshara was applied with cotton swab and kept over for 2 minutes or till the count of 100 *Matras*/numbers. The Kshara was then washed away by *Takra* with the help of a syringe.

POST PROCEDURE: Light diet was advised. *Eranda Bhrista Haritaki Choorna* (5gm once daily- at night time) and *Avagaha Sweda* (warm water sitz bath) with *Panchavalkal Kwatha* (3 times per day) were advised for 7 days post procedure.

RESULTS: Post-treatment reduction in bleeding P/R and size of pile mass was statistically highly significant in both the groups ($p<0.001$), whilst this ratio showed slight different statistically significant results in haemorrhoid grade reduction (i.e., $p<0.02$ in Group A and $p<0.01$ in Group B). Kutaja group (cured in 80% cases and improved in 20% cases) showed comparatively better results in the cure and reduction of signs and symptoms of haemorrhoids than Palasha group (cured rate 80%, improved in 20% cases and unchanged in 10%).

CONCLUSION: *Pratisarana* by *Palasha* and *Kutaja Kshara* was found effective in obliterating the haemorrhoid mass within 7days of single application. It was observed that *Ksharpatana* treatment yielded highly significant results in 1st & 2nd degree piles while in 3rd degree piles patients showed significant improvement only. *Kutaja Ksharpatana* had shown better results in treating piles with short duration than *Palasha Kshara*. No adverse effect was observed during and after the treatment.

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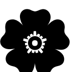
62. T. S. Dudhamal, S. K. Gupta, Chaturbhuja Bhuyan, Kulwant Singh. Clinical study of Kutaja and Palasha Kshara in the management of arsha. Indian Journal of Ancient Medicine and Yoga.2009;2(2):177-122.[ISSN:p.0974-6986,e.0974-6994]

https://www.researchgate.net/publication/297715853_Clinical_study_of_Kutaja_and_Palasha_Kshara_in_the_management_of_Arsha



The importance of Ksharasutra in the management of *Arsha* (A study of 3586 Cases)[63]

PURPOSE: To evaluate *Ksharasutra* ligation of piles as the safest, affordable and most efficient treatment modality over the currently available piles management procedures.

MATERIAL AND METHODS:

DIAGNOSTIC CRITERIA: Patients were examined for clinical signs and symptoms of piles according to current practice by thorough clinical examination like inspection, P/R digital & proctoscopic examination.

INCLUSION CRITERIA: Patients suffering from 2nd, 3rd & 4th degree piles were selected irrespective of age, sex, religion, education & socioeconomic status. The following clinical manifestations of piles were recorded at each visit: bleeding P/R, degree of prolapsed mass with or without pain, as well as anal itching and discharge.

EXCLUSION CRITERIA: Carcinoma of rectum & anal canal; chronic disorders like diabetes mellitus, hypertension, chronic renal failure, liver disorders and cardiac diseases were excluded.

OPERATIVE PROCEDURE: Under local anaesthesia with all aseptic precautions, each pile mass was hold with the help of a pile holding forceps. Each pedicle was then transfixed and ligated with *Ksharsutra* swaged on a curved round body needle. The procedure then involves irrigating with warm water and after ensuring complete haemostasis a "T bandage" was applied with a gauze piece soaked in *Jatyadi* oil.

POST-OPERATIVE: Post-ligation advises includes: warm *Pancha Valkal Kwath* sitz bath at least thrice a day by adding 5gm *Sphatikadi Yog* for a minimum period of 3 weeks, *Triphala Guggulu* tablet (500mg tds), *Erand Bhrishta Haritaki* (5-10 gm once at night time with warm water), and 10ml of *Jatyadi Taila Matrabasti* once a day for first week followed by twice a day for another two weeks. Analgesics were preferred in uncontrollable pain cases while antibiotics were seldom used.

GENERAL ADVICES: Patients were strictly advised to: ambulate during this period of treatment, practise normal food habits, with plenty intake of fibrous diet, vegetables and water. Further they were instructed to avoid irritant and constipation causing foods. They were told to avoid constipation by taking suitable and mild laxatives. They were to avoid prolonged sitting as well as standing periods, during and even after the treatment.

ASSESSMENT CRITERIA: Time taken for removal of the pile masses, disadvantages in respect to convalescence period, post-operative bleeding per rectum, and chances of recurrence were taken into consideration before assessing the over-all usefulness of this ancient Indian treatment modality over the conventional treatments.

OBSERVATIONS & RESULTS: The cutting period of pile masses was found to range b/w 3 to 7 days (most of the piles masses were removed within 4th and 5th day of ligation). The cases were followed up to one year at maximum or for a minimum period of one month, after completion of the treatment. The patients were asked to report any untoward effect even after 1 to 5 years of the procedure. None of the cases under the study have reported recurrence till this date. In some of the cases swelling, abscess and sinus were observed. The cases were treated according to conservative & *Kshara Karma*.

CONCLUSION: The method of *Ksharasutra* ligation in management of *Arsha* (piles) is one of the most effective treatments with limited complications and negligible recurrence rates. Henceforth, wide use of this method should be recommended among the practicing surgeons especially proctologists.

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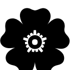
63. C. BHUYAN, S. K. GUPTA, T. S. DUDHAMAL. The Importance of Ksharasutra in the Management of Arsha (A study of 3586 Cases); 2009; 30 (2); 142-146 https://www.researchgate.net/publication/277328170_The_Importance_of_Ksharasutra_in_the_Management_of_Arsha_A_study_of_3586_Cases



The role of Apamarga Kshara in the treatment of Arsha[64]

PURPOSE: The current study reports the topical use of a herbal drug, i.e., *Apamarga Ksharpatana* in the management of *Arsha*.

MATERIAL AND METHODS:

STUDY DESIGN: In this randomized clinical trial 30 patients of *Arsha* or piles were selected by simple random sampling method.

DIAGNOSTIC CRITERIA: Diagnosis was made on the basis of P/R examinations, i.e., inspection, palpation digital and proctoscopic examination.

INCLUSION CRITERIA: Patients presenting with complaints of *Arsha* (1st, 2nd and 3rd degree piles), i.e., bleeding per rectum, prolapse of piles, pain, discharge and pruritus, irrespective of age, sex, religion, education and socioeconomic status, were included in this study.

EXCLUSION CRITERIA: Patients suffering from carcinoma of rectum, hypertension, diabetes mellitus and cardiac disorders were excluded.

INVESTIGATIONS: Routined haemogram (including blood sugar levels) alongwith routine and microscopic examination of urine and stool were carried out.

OPERATIVE PROCEDURE: In lithotomic position, with all aseptic precautions, a lubricated split proctoscope was introduced in the anal canal. The pile mass was fixed at the suitable place into the aperture. After cleaning the pile mass with gauze pieces, *Tikshna Apamarga Kshara* was applied. Applied *Kshara* was kept for 2 minutes or till the count of 100. The *Kshara* was then washed away with *Takra* (buttermilk). After application of the *Kshara*, the pile mass changed to its colour to black (*Jambu* phalavat, i.e., the fruit of *Syzizium cumini* Linn.). *Madhu* and *Ghrita* were applied to overcome *Gudadaha* (burning sensation). This procedure was repeated for each pile mass separately at the same sitting.

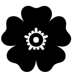
POSTOPERATIVE PROCEDURE: Light diet was allowed by the evening. *Erand bhrishta haritaki* 5 g at night was administered. *Avagaha sweda* (warm water sitz bath) with *panchavalkal kwatha* 8 hourly was advised from the next day morning for 7 days.

RESULTS: There was a statistically significant improvement of 84.33% in *Raktasrava* or bleeding and *Vedana* or pain. Relief in *Gudadaha* was observed to the extent of 82.00%, whereas 75.33% relief was seen in *Pichhila Srava*. 73.33% relief was recorded in *Arshabhransha* cases, while 77.66% relief was recorded in *Gudakandu* patients.

In a few patients, burning sensation was observed during and after the *Ksharapatan*, which was managed with *Takra* and local application of *Yashtimadhu Ghrita*. Some patients had complained of watery discharge and slight oozing of dark colored blood after the application of *Kshara* which stopped shortly after the procedure without any medication.

CONCLUSION: Pile masses shrunk out with *Apamarga Ksharapatan*. Apamarga *Ksharapatan* was found to be an effective method for the treatment of 1st and 2nd degree piles without any side effects or adverse effects.

64. Dudhamal TS, Gupta SK, Bhuyan C, Singh K. The role of Apamarga Kshara in the treatment of Arsha. *Ayu*. 2010;31(2):232-235. doi:10.4103/0974-8520.72406 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3215370/#:~:text=As%20per%20the%20available%20treatment,used%20in%20treating%20the%20Arsha.



Effect of Arshohara Malahara and Adjuvant Drugs in the management of Arsha (1st and 2nd Degree Piles)[65]

PURPOSE: To evaluate the efficacy of Arshohara Malahara and adjuvant drugs in the management of 1st and 2nd degree piles.

MATERIAL AND METHODS:

STUDY DESIGN: A randomised clinical trial with 30 patients having signs and symptoms of 1st and 2nd degree piles selected from OPD and IPD of Shalya Tantra.

INCLUSION CRITERIA: Patients aged b/w 21-70yrs suffering from 1st and 2nd degree piles. Also patients of all *Doshika* types of *Arsha* i.e. *Vataja, Pittaja* and *Kaphaja* were included.

EXCLUSION CRITERIA: Cases of 3rd and 4th degree piles, complicated piles like thrombosed and inflamed piles, associated with ano-rectal diseases like anal fissure, fistula-in-ano, and malignancy of ano-rectum were excluded. Other systemic diseases like colitis, uncontrolled diabetes mellitus, untreated tuberculosis and uncontrolled hypertension were also excluded.

LABORATORY INVESTIGATIONS: Routine haemogram: FBS, HIV, HBsAg, VDRL, and Urine examination were carried out at base line.

GROUPING:

Group-A: 10gm *Arshohara Malahara* local application P/R by tube applicator 2 times a day, for four weeks.
Group-B: 10 ml *Jatyadi Taila* local instillation per rectum by plain rubber catheter no. 8 for four weeks.

COMMON DRUGS FOR BOTH GROUPS: *Triphala Guggulu*-2 tablets (500 mg each) three times a day, warm sitz bath with *Karanjadi Kwath* three times a day and *Erandabhrishta Haritaki*-5 gm at bed time with luke warm water for four weeks.

RESULT:

In group-A: 86.67% patients were cured within 7 days after application of *Arshohara Malahara* in this group. Out of 15 patients, 13 patients got complete relief in sign and symptoms where as two patients showed marked improvement. All patients got 100% relief in symptoms of *Malabaddhata*, *Vedana* and *Raktasrava*. Maximum 44% patients showed reduction in size of piles.

In group- B: 60% patients were cured in Group-B. Out of 15, maximum 9 patients got relief from symptoms within 7 days as per criteria fixed. Remaining 5 patients showed marked improvement, while one patient got moderate improvement after completion of treatment. In this group 100% relief was seen in *Malabaddhata* while 85.71% relief in *Raktasrava,* and 93.33% relief observed in *Vedana*. 26.08% cases showed reduction in size of piles and result was found to be statistically significant.

CONCLUSION: *Arshohara Malahara* was more effective in symptomatic relief in 1st and 2nd degree piles as compared to standard drug *Jatyadi Taila*.

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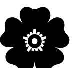
65. Dudhamal TS, Gupta SK, Solanki M; Effect of *Arshohara Malahara* and Adjuvant Drugs in the management of *Arsha* (1st and 2nd Degree Piles); ISBN 978-93-5173-179-3; Vol. 2 Issue- 3RD AUGUST 2014; [ISSN 2320-7329] http://www.ayurlog.com

https://www.researchgate.net/publication/322695819_Effect_of_Arshohara_Malahara_and_Adjuvant_Drugs_in_the_management_of_Arsha_1st_and_2nd_Degree_Piles



Ksharasutra ligation in Arsha (second degree intero-external piles): a case report[66]

CASE DESCRIPTION: A 35 year patient with complaints of bleeding per rectum during defecation in syringing pattern, and self-reducible protruded mass of piles during defecation since last 3months was admitted to the hospital. He was a labourer working in a ship with the habit of taking non vegetarian and spicy food, and addiction of tobacco chewing.

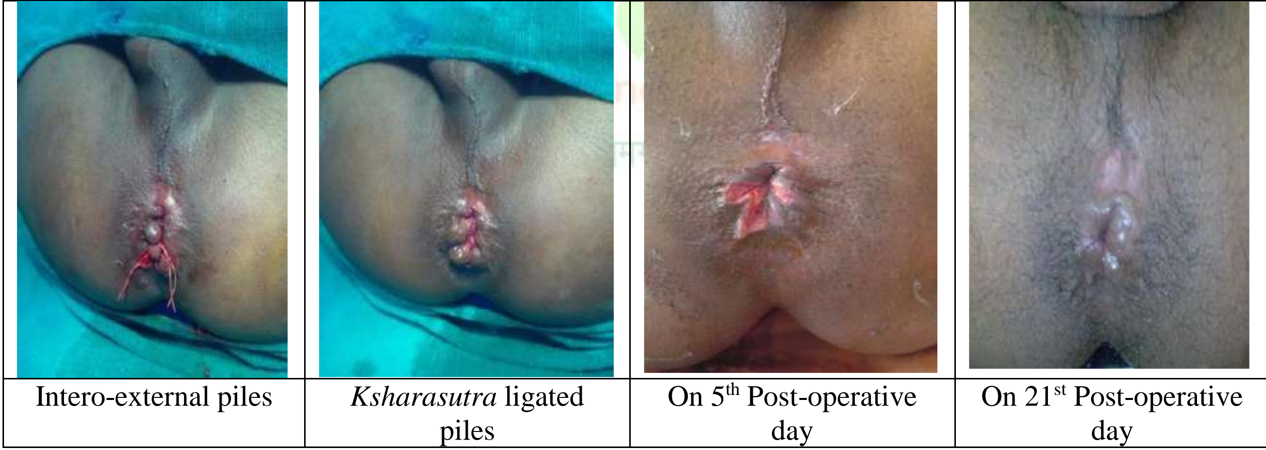
ON EXAMINATION: External piles at 7 and 11 o'clock position were noticed. In proctoscopy examination, there were two interno-external piles at 7 and 11 o'clock position.

INVESTIGATION: Routine pre-operative laboratory investigation for blood, urine and stool were done and found within normal limit. Chest X-ray and USG of whole abdomen were done and reports were found within normal limit.

THERAPEUTIC INTERVENTION: Under spinal anaesthesia, with all aseptic condition, four finger anal dilation was performed by Lord's procedure. First of all the interno-external pile mass at 11 o'clock was hold by piles holding forceps and skin of external piles was incised by cutting scissors up to mucocutaneous junction without injure the mucosal part. Then transfixation and ligation was done at the base of pedicle by *Ksharashootra*. The thread then placed along the incised part of external piles mass and riff knot was applied at four directions. Same procedure was adopted for transfixation and ligation of pile situated at 7 o'clock position.

RESULT: On the 5th day, the *Ksharasutra* was twisted sloughed out necrosed pile mass, and fresh wound was observed. Dressing and *Matra vasti* by *Jatyadi Taila* was continued for further 10 days. On the 11th day anal dilatation was started with anal dilator no. 4 lubricating with *Jatyadi Ghrita*. On the 15th day wound was observed in healing stage, and there was no sphincteric spasm. On post-operative 21st day the wound was completely healed without stricture or any complication.

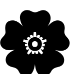
CONCLUSION: Interno-external piles can be treated with Ksharasutra without any adverse effects. As it is a single case study further studies are required for definite conclusions.



Intero-external piles	*Ksharasutra* ligated piles	On 5th Post-operative day	On 21st Post-operative day

66. Bibhu SD, Gupta SD, Dudhamal TS, Mahanta VD; Ksharasutra Ligation In Arsha (Second Degree Intero-External Piles): A Case Report; Punarnav: July- August 2014: Vol: 2 Issues: 4 [Issn: 2348 1846]

https://www.researchgate.net/publication/272498797_Ksharasutra_ligation_in_Arsha_second_degree_intero-external_piles-A_Case_Report



Clinical efficacy of Arshonyt tablet and ointment in Piles & Fissure-in-ano[67]

PURPOSE: To study the effect of Arshonyt tablet & ointment in piles and fissure-in-ano cases.

MATERIALS AND METHODS:

STUDY DESIGN: This study was an open prospective interventional study of 63 patients having complaints of piles and fissures.

INCLUSION CRITERIA: Patients of either gender between age of 20-70 years having 1st, 2nd & 3rd grade haemorrhoids, and acute as well as chronic fissure-in-ano were included.

EXCLUSION CRITERIA: Patients of congenital rectal polyp, anal stenosis, fourth degree haemorrhoids, and complicated haemorrhoids like thrombosed piles, strangulated piles etc. were excluded. Patients of piles or anal fissure associated with fistula-in-ano, ano rectal abscess were also excluded from the study. Patients having anaemia (Hb% < 7 gm%) and systemic diseases like cardiovascular, renal, hepatic, neurological cases alongwith unwilling patients were also excluded from the study.

INVESTIGATIONS: Routine hematological investigations such as Hb%, TLC, DLC, BT, CT, ESR. AST, ALT, Alkaline phosphatase, Bl. urea & Sr. creatinine were done before and after the study.

DRUG POSOLOGY: Oral tablet: Two tablets of Arshonyt twice a day for two weeks.

Local application: Per rectal application of Arshonyt ointment twice a day in appropriate quantity.

RESULTS: After first week treatment, 54.75% relief was seen in inflammation and at the end of the second week 80.45% reduction in inflammation was observed.

Bleeding per rectum was reduced by 62.29% after the first week, and by 92.00% after second week. Among 44 patients with bleeding per rectum, 20 patients got complete cessation in bleeding during first week, and 18 patients got complete cessation in bleeding by second week.

Pain in ano was reduced by 57.22% after the first week, and 82.99% relief in pain was obtained by the second week. Among 54 patients with pain in ano, 16 patients got complete relief from pain by first week, and 25 patients got complete relief from pain after second week.

The reduction in perianal itching in first week was 60.98%, while 84.76% in second week. Among total 28 patients of itching per ano, 12 patients got complete relief from itching in first week, and 10 patients got complete relief from itching after the second week. Protrusion of piles was reduced by 40.59% at the end of first week, and 47.52% at the end of second week.

Among 49 patients of piles, three patients had piles size reduction by the first week, and 10 patients got complete reduction of piles by completion of second week.

CONCLUSION: Arshonyt forte tablet and Arshonyt ointment have shown potential to cure piles of second degree cases alongwith cases of acute as well as chronic fissure-in-ano. The formulations were easy to use without any adverse effects.

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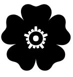
67. Gupta SK, Dudhamal TS, Baghel MS, Patil PD. Clinical Efficacy of Arshonyt Tablet and Ointment in Piles & Fissure-in-ano. Annals of Ayurvedic Medicine (AAM) 2014;3(3-4):81-87. [ISSN: p-2277-4092, e-2347-6923] www.scopemed.org or www.ejmanager.com/aam
https://www.researchgate.net/publication/277069938_Clinical_Efficacy_of_Arshonyt_Tablet_and_Ointment_in_Piles_and_Fissure-in-ano



Ksharasootra ligation in complicated case of fourth grade interno-external piles: A case report[68]

CASE DESCRIPTION: A 45 year old male patient had complaints of irreducible prolapsed pile mass during defecation with severe pain and bleeding during defecation.

ON EXAMINATION: On per anal examination 3, 7 and 11 o'clock big inflamed interno-external piles were seen. Proctoscopic examination confirmed the diagnosis as a case of fourth grade interno-external haemorrhoids at 3, 7, & 11 o'clock position. After careful interrogation with patient, following causative factors were identified like daily two wheeler riding, intake of excess spicy food, irregular food habits and straining to pass stool habitually.

INVESTIGATION: Routine laboratory investigations for blood, urine, stool, chest X-ray and USG of whole abdomen were done, and all reports were found within normal limit.

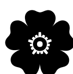
THERAPEUTIC INTERVENTION: Appropriate antibiotics and analgesic were prescribed for initial three days to minimize infection and inflammation. After five days inflammation was resolved and the size of piles was remarkably reduced. Under spinal anaesthesia, with all aseptic condition, four fingers anal dilatation was done by Lord's procedure. First of all interno-external pile mass at 11 o'clock was hold by piles holding forceps and skin of external piles was incised by scissors up to mucocutaneous junction without injury to mucosa. Then transfixation and ligation by *Ksharashootra* was done at the base of pile. The thread then placed along the incised part of external piles mass and riff knot was applied at four directions. Same procedure was adopted for transfixation and ligation of piles situated at 7 o'clock and 3 o'clock position. After proper haemostasis was achieved, the part was then cleaned by betadine, and then a diclofenac suppository was inserted inside anal canal.

RESULT: On sixth post-operative day the *Ksharsootra* was twisted, so necrosed piles masses sloughed out, and fresh wound was observed. On post-operative 11th day anal dilatation was started with anal dilator no. 6 lubricating with *Jatyadi Ghrita*. On the 15th post-operative day wound was observed in healing stage and there was no sphincter spasm. On post-operative 30th day wound was completely healed without stricture or any complication or scar formation. The patient was followed up for 15 days after the procedure, and there was no pain, inflammation or abnormality detected.

CONCLUSION: Fourth grade complicated interno-external piles can be treated with *Ksharasootra* ligation without post-operative complication and need more samples study for definitive conclusion.

Interno-external piles	Ksharasutra ligation in piles	After 30 days

68. Manoj Bhadja, Dudhamal TS, Gupta SK. *Ksharasootra* ligation in complicated case of fourth grade intero-external piles: A Case Report. International Journal of Herbal Medicine. 2014; 3(5): 52-55. [ISSN: e-2321-2187, p-394-0514]. www.florajournal.com
https://www.florajournal.com/archives/2015/vol3issue5/PartA/3-4-11.1.pdf



Excision followed by Agnikarma in the management of recurrent papilloma-a rare case report.[69]

CASE DESCRIPTION: A 32 year old female had complaint of non-inflammatory cystic swelling at perianal region. It was initially a small, painless cystic swelling which suddenly increased in size with mild itching and discomfort during sitting. Patient consulted a private hospital on 13/11/2010 in Rajkot where the swelling was excised, and wound healed completely. One month later she again developed complaints of itching and swelling in the same place. As symptoms were of mild in nature, she ignored that swelling for two years. Then the swelling gradually increased in size with irritation, & due to concern about impending malignancy she consulted a private hospital again, & got operated on 5/10/12. The cystic swelling was excised and biopsied, when it was diagnosed as a papilloma. 3 months later she developed same complaints which made the patient depressed, she then opted to consult an Ayurvedic hospital for further treatment.

ON EXAMINATION: There was pedunculated and irregular multiple cystic swelling at left perianal region approximately 7 cm away from anal verge. The swelling was painless, soft in consistency, and without any discharge which was primarily diagnosed as keloid because of its recurrence.

INVESTIGATION: CBC, E.S.R., B.T., C.T., FBS, Bl. Urea and Sr. Creatinine were found within normal limit. HIV, VDRL and HBsAg tests were found to be negative.

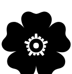
THERAPEUTIC INTERVENTION: Under Local anaesthesia with all aseptic precautions, the whole cystic swelling was excised from base with surgical blade. Mild oozing of blood was present which subsided by applying pressure for few minutes. *Panchadhatu Shalaka* was heated up to red hot, and *Agnikarma* done (i.e., whole raw area was burnt at base formed after excision). Aloevera gel was applied with sprinkling of turmeric. For 7days patient had regular scheduled visits of the hospital to clean the wound with *Panchavalkal Kwath* and then dressing was done with *Kasisadi Tail*.

RESULT: The wound healed steadily and progressively without any complaints. *Panchavalkal* decoction has purifying and wound healing properties, so it promoted better healing of the wound. After 7 days post excision and *Agnikarma,* wound was almost healed with minimum scar.

CONCLUSION: Recurrent papilloma can be treated with *Agnikarma*. This single case study aims to prove the Ayurvedic principle of non-occurrence of disease when treated with *Agnikarma*, which needs further validation by doing extensive studies in larger samples.

Multiple cystic swelling at left perianal region	Wound after 7 days	After follow up of 9 months

69. Ruchi Pandey, Dudhamal TS, Gupta SK, Gaur A. Excision followed by Agnikarma in the management of recurrent Papilloma-a rare case report. European Journal of Biomedical and Pharmaceutical sciences (EJBPS). 2016; 3(6):322-325. [ISSN 2349-8870] http://www.ejbps.com SJIF Impact Factor 3.881
https://www.researchgate.net/publication/308902456_Excision_followed_by_Agnikarma_in_the_management_of_recurrent_Papilloma-a_rare_case_report



Efficacy of Apamarga Teekshna Kshara Prateesaraniya in the management of Arsha (1st and 2nd degree piles)-pilot study[70]

PURPOSE: To study the efficacy of *Apamarga Teekshna Kshara* as *Prateesaraniya* in 1st & 2nd degree piles.

MATERIAL AND METHODS:

STUDY DESIGN: An open labelled single armed progressive clinical trial on 9 patients of clinically diagnosed piles (*Arsha*) irrespective of their sex, religion, occupation, etc.

DIAGNOSIS CRITERIA: Diagnosis was made on the basis of physical examination and PR examination, i.e. inspection, palpation and proctoscopic examination.

INCLUSION CRITERIA: Patients of age in b/w 17-60 years having internal piles of 1st and 2nd degree were included.

EXCLUSION CRITERIA: The patients of CA rectum, hepatitis, heart diseases, 3rd and 4th degree piles, external piles, inflamed/prolapsed/thrombosed piles, involvement of fissure-in-ano and fistula-in-ano were excluded. Patients suffering from TB & pregnant women were also excluded from study.

INVESTIGATION: All the routined examination of blood was carried out.

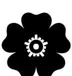
METHODOLOGY: With all aseptic precautions, the slit plastic proctoscope was inserted and the lower end of the slit was fixed for better visualization of piles. Anal canal was cleaned by a gauze piece. A wet sterile cotton ball was placed just behind the internal piles to preserve the healthy tissues. *Kshara* was taken by using the blunt tip of the BP handle and applied to the internal piles without rubbing it, and left for about 100 *matra* (approx. 2 min). After observing the changes in piles colour, 5ml of pure lemon juice was pushed to neutralize the alkaline nature of *Kshara,* and was left for about 60 sec. Cotton ball was used to drain & wipe the anal canal. Then 5ml of distilled water was pushed to clean the left residue. The liquid contents left then were absorbed by cotton balls. Proctoscope was withdrawn, and *Picchu* of *Yasthi Madhu Ghrit* was introduced and kept for 3 hours.

RESULT: Among 9 patients who underwent the procedure, total 66.7% got complete remission.

CONCLUSION: This study promotes *Apamarga Teekshna Kshara Pratisaraneeya Karma* as one of the effective, safe, easy, & less time consuming procedure for management of internal piles with no hospitalization requirement, which requires further validation.

Before *Kshara* application	During *Kshara* application	After *Kshara* application

70. Komang Sudarmi, Dudhamal TS, Gupta SK, Mahanta VD. Efficacy of Kshara Application in the Management of Internal Haemorrhoids - Pilot study. International Ayurvedic Medical Journal (IAMJ) 2016;4(7):1112-1116 [ISSN:2320 5091]. www.iamj.in
https://www.researchgate.net/publication/308902463_Efficacy_of_Kshara_Application_in_the_Management_of_Internal_Haemorrhoids_-_Pilot_study



Efficacy of Kshara application in the management of internal haemorrhoids-a pilot study[71]

PURPOSE: To study the efficacy of *Kshara* application in the management of internal haemorrhoids.
MATERIAL AND METHODS:
STUDY DESIGN: An open labelled single armed prospective study on 33 clinically diagnosed patients of haemorrhoids (*Arsha*) irrespective of sex, religion, occupation, etc.
DIAGNOSIS CRITERIA: Diagnosis was made on the basis of physical examination & PR examination, i.e. inspection, palpation and proctoscopic examination.

INVESTIGATION: All routined examination of blood, urine, stool and X-Ray were carried out.

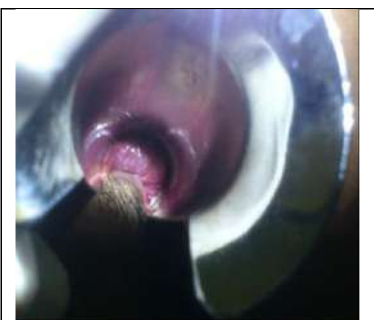
INCLUSION CRITERIA: Patients within age group 20-50 years having internal piles of 1st, 2nd and 3rd degree were included in this study.

EXCLUSION CRITERIA: The patients of hepatitis, TB, heart diseases, CA rectum, 4th degree piles, external piles, inflamed/prolapsed/thrombosed piles and pregnant women were excluded.

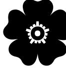
PROCEDURE: 33 patients who underwent *Ksharakarma* for the treatment of piles for first time in the year 2014 to 2015. Among them, 29 patients *Ksharkarma* was done once and in 4 patients due to larger size of pile mass *Ksharkarma* was done twice.

RESULTS: After *Kshara* application all patients were followed up weekly for 4 weeks. There was moderate to mild pain, tenderness, inflammation and brownish black discharge on first and second visit. During the third visit, there was no pain, tenderness, discharge or anal stricture, and the internal haemorrhoids were completely resolved. *Ksharakarma* shows significant improvement on clinical features of *Arsha* like rectal bleeding, pain-in-ano and constipation. Overall effect of therapy by *Ksharakarma* showed 69.7% of the patient got complete remission of symptoms. Average time taken for complete remission of pile mass was 21 days by *Ksharakarma* without bleeding or pain.

CONCLUSION: This study showed that *Tikshna Apamarga Kshara* treatment alongwith conservative treatment, diet restriction and life style modification for a minimum of 6 month period is effective in obliterating the 1st, 2nd & 3rd degree pile mass, as well as preventing its recurrence.

		
Second degree piles before treatment	After application of *Kshara,* pile became dark brown in colour	Status of piles 21 days after *Kshara* application

71. Shah B, Dudhamal TS, Prasad S. Efficacy of Kshara application in the management of Internal haemorrhoids-A pilot study. Journal of US China Medical Science 2016; 13(3):169-173. [ISSN: 1548-6648]. Impact factor: 0.827. http://www.davidpublisher.com
https://www.researchgate.net/publication/309439136_Efficacy_of_Kshara_Application_in_the_Management_of_Internal_Haemorrhoids-A_Pilot_Study



Ksharasutra ligation in the management of fourth degree multiple haemorrhoids in single sitting-a case report[72]

CASE DESCRIPTION: A 36 year old male patient had complaints of protrusion of mass per rectum since last 3 months along with bleeding P/R after defecation in syringing manner on and off for 4 months. He had also pain-in-ano after defecation since 15 days.

ON EXAMINATION: There were fourth degree pile mass at 3, 7 and 11 o'clock position.

INVESTIGATION: Routine investigations for blood, urine, stool, and radiological test were found normal.

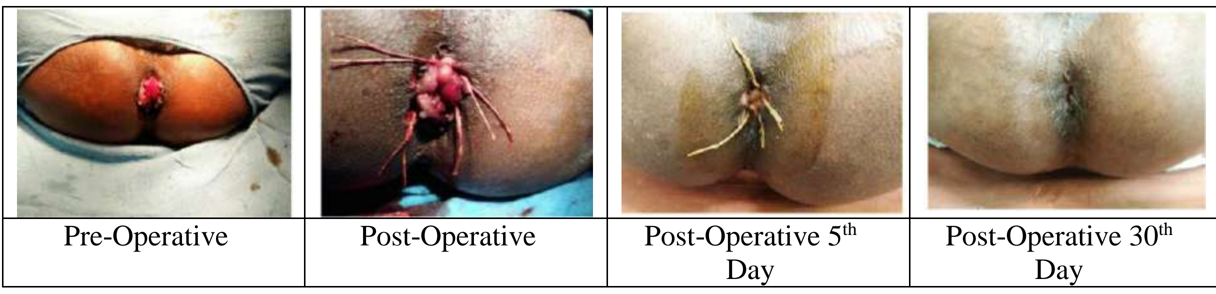
THERAPEUTIC INTERVENTION: Under spinal anesthesia with all aseptic precautions, at first 3 o'clock pile mass was held with pile holding forceps and external component was incised by using cutting scissors up to the level of mucocutaneous junction sparing the sphincter muscles and mucosal part. Bleeders were checked by the use of electro-cautery. Using a round body curved needle and *Ksharasootra*, pile mass was transfixed and ligated at the base of its pedicle. Along the separated part of the external component from the skin the thread was placed and reef knot was tied. In similar way 7 and 11 o'clock pile mass was transfixed and ligated.

POST-OPERATIVE MANAGEMENT: Antibiotic coverage was given by giving Ceftriaxone 1.5 gm bd and tab. Ornidazole 500mg tds for three days. From first post-operative day, daily sitz bath with *Panchavalkal Kwatha* twice a day, *Triphala Guggulu* 500 mg tds and *Eranda Bhrishta Haritaki* 5 gm at night with lukewarm water was advised.

Dressing was done daily, along with 10 ml *Jatyadi taila Matra Basti*. From the second post-operative day twisting of thread was done during dressing as the necrosis of pile mass has started. Necrosed pile mass at 3, 7 and 11 o'clock got sloughed out on third post-postoperative day, and 3 o'clock pile mass on the following day. Fresh wounds were observed at the respective place of pile masses. Daily dressing and *Matrabasti* was continued further for 7 days. Thereafter anal dilatation was done with no.6 dilator lubricated by *Jatyadi Ghrita,* and 10 ml of *Jatyadi Taila Matra Basti* daily was given for 15 days, to prevent stricture.

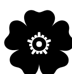
RESULT: On 30th post-operative day wounds were completely healed without any complication.

CONCLUSION: *Ksharasootra* ligation in fourth degree multiple piles in single sitting is not only effective in treating the structural defect but is also better than modern medical practices in minimizing the post-operative complication. It is safe, simple with minimum complications, and no recurrence rate in comparison to open or closed haemorrhoidectomy.



Pre-Operative	Post-Operative	Post-Operative 5th Day	Post-Operative 30th Day

72. Shah B, Maurya S, Dudhamal TS. Ksharasutra ligation in the management of fourth degree multiple haemorrhoids in single sitting – A case report - A Case Report A Case Study Int. J AYUSH CaRe. 2018; 2(2):8-12. [ISSN: e-2457-0443]. www.ijacare.in
https://www.ijacare.in/index.php/ijacare/article/view/35



Comparative clinical study of *Apamarga Kshara* application, infrared coagulation and *Arshohara Vati* in the management of *Arsha* (1st and 2nd degree hemorrhoids)[73]

PURPOSE: To compare the efficacy of *Apamarga Kshara* application *or Arshohara Vati* intake with standard protocol of IRC in management of *Arsha.*

MATERIALS AND METHODS:
STUDY DESIGN: This study was an open, prospective, interventional study of 4 weeks on patients having complaints of internal hemorrhoid of 1st and 2nd degree.

INCLUSION CRITERIA: Patients of either gender b/w 18-65 years with 1st & 2nd degree internal piles, or with *Mridu, Prastruta, Avagadha*, and *Uchrita* (soft, deep-seated and elevated piles) type of *Arsha* & controlled blood pressure, diabetes mellitus and cardiac disorders were included in the study.

EXCLUSION CRITERIA: Patients of either gender less than 18 years and >65 years, patients with 3rd & 4th degree piles, patients having rectal prolapse/fissure/fistula-in-ano having uncontrolled hypertension/diabetes mellitus/cardiac disorders, patients with malignancy of any organ; pregnant women and patients with hepatitis B, TB, HIV & VDRL positive cases were excluded from the study.

INVESTIGATIONS: Routine hematological, biochemical, and microbial investigations were done at baseline in the patients of the all group.

GROUPING & THERAPEUTIC INTERVENTION:
Group *Apamarga Kshara* application (AKA): *Apamarga Kshara* paste application was done for 1-3 sittings as needed.
Group IRC: IRC procedure was done for one sitting on all the piles masses.
Group *AV*: Oral administration of *Arshohara Vati* tablet 500 mg, 2 tablets tds after food for 15 days.

OVERALL ASSESSMENT: In Group *AKA* 80% (n = 8) of patients got complete remission. In Group IRC, 20% of patients got complete remission & in Group *AV*, 30% (n = 3) of patients got complete remission.

Table 1: Overall effect of therapy (*n*=10 each group)

Group	Cured *n* (%)	Marked Improvement *n* (%)	Moderate Improvement *n* (%)	Mild Improvement *n* (%)	Unchanged, *n* (%)
Group AKA	8 (80)	2 (20)	0	0	0
Group IRC	2 (20)	1 (10)	4 (40)	2 (20)	1 (10)
Group AV	3 (30)	5 (50)	1 (10)	1 (10)	0

AKA: *Apamarga Kshara* application, **AV**: *Arshohara Vati*, **IRC**: Infrared coagulation

CONCLUSION: Group AKA has shown better potential to treat internal piles up to 2nd degree in comparison to IRC procedure and *Arshohara Vati* administration. The procedure is cost and time effective and without adverse effects.

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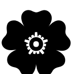
73. Sudarmi K, Dudhamal TS. Comparative clinical study of Apamarga Kshara application, infrared coagulation and Arshohara Vati in the management of Arsha (1st and 2nd degree hemorrhoids). AYU 2017;38:122-6. [ISSN: p-0974-8520 e-0976-9382] www.ayujournal.com
https://www.researchgate.net/publication/327256894_Comparative_clinical_study_of_Apamarga_Kshara_application_infrared_coagulation_and_Arshohara_Vati_in_the_management_of_Arsha_1_st_and_2_nd_degree_hemorrhoids



Efficacy of Apamarga Kshara application and Sclerotherapy in the management of Arsha (1st and 2nd degree piles) - an open-labeled, randomized, controlled clinical trial[74]

PURPOSE: To study the effect of *Apamarga Kshara* & sclerotherapy in the management of 1st & 2nd degree piles.

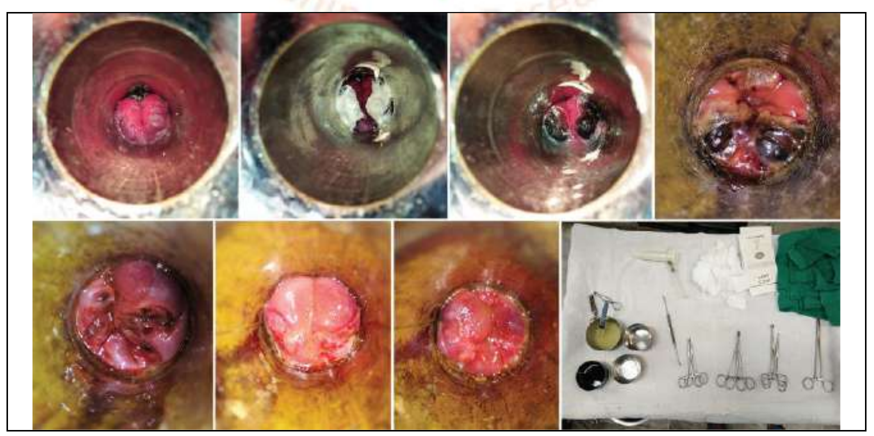
MATERIAL AND METHODS:
STUDY DESIGN: An open labelled randomized clinical trial.
INCLUSION CRITERIA: Patients belonging to age group of 18-65 years & suffering from 1st & 2nd degree internal piles or *Mridu, Prastruta, Avagadha* and *Uchritani* (soft, deep seated and elevated piles) type of piles were included.

EXCLUSION CRITERIA: Patient of age <18 and >65 years, having 3rd and 4th degree piles, rectal prolapse, haemorrhoid associated with fissure, and fistula-in-ano were excluded. Patient having uncontrolled hypertension, diabetes mellitus, cardiac disorders, malignancy of any organ, pregnant women, hepatitis B, tuberculosis, human immune-virus (HIV) and venereal disease research laboratory (VDRL) positive cases were also excluded.

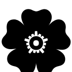
GROUPING:
Group A–*AKA* Group (n = 25): in which patients were subjected for *AKA* procedure for one to three sitting (as per requirement) at minimum of 7 days' interval.
Group B–SCL Group (n = 25): in which patients were subjected for SCL procedure one to three sitting (as per requirement) at minimum of 15 days' interval.

RESULT: Out of 50 patients, in group *AKA*, 96% of patients were cured, while in 04% of patient, marked improvement. In group SCL, it was noted that 76% of patients were cured, 12% of them were noted to have marked improvement and 12% of patients achieved moderate improvement.

CONCLUSION: This study shows *Apamarga Kshara* application (*AKA*) is a better choice for the management of 1st and 2nd degree internal piles as compared to sclerotherapy (SCL).



74. Shah B, Dudhamal TS. Efficacy of Apamarga Kshara application and Sclerotherapy in the management of Arsha (1st and 2nd degree piles) - An open-labeled, randomized, controlled clinical trial. AYU 2018;39/4: 213-219. [ISSN: p-0974-8520 e-0976-9382] www.ayujournal.com https://www.researchgate.net/publication/334255209_Efficacy_of_Apamarga_Kshara_application_and_Sclerotherapy_in_the_management_of_Arsha_1_st_and_2_nd_degree_piles_-_An_open-labeled_randomized_controlled_clinical_trial



Role of Kshara Sootra in complicated cases of Arsha (interno-externo haemorrhoids)-a case series[75]

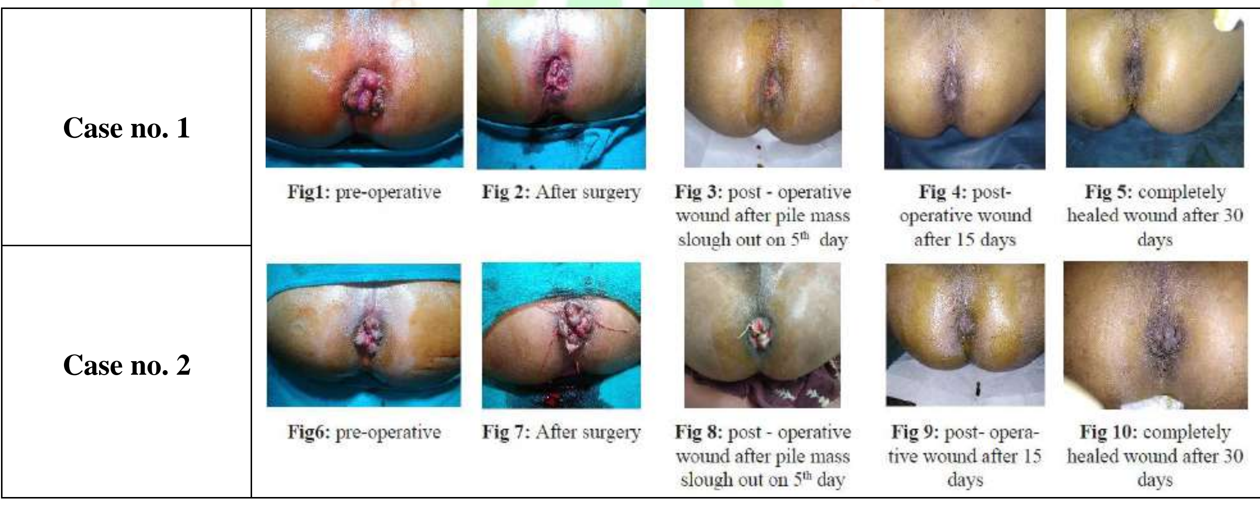
Case no.1 A 24 year old male patient had complaints of protrusion of mass per ano which was manually reducible since last 3 months. Patient had a history of off and on bleeding in syringing manner since last 2 years. On perianal examination interno-external hemorrhoids were found at 3, 7 and 11 o'clock in lithotomy position. Based on clinical findings patient was diagnosed to be an interno-external hemorrhoid case.
Case no.2 A 30 year old male patient had complaints of off and on bleeding in syringing manner since last 4 years with a non-reducible prolapsed mass and pain per rectum since last 7 days. Patient had history of 2 Units blood transfusion before 1 week of the surgery for hemorrhoids. As per rectal examination, patient was diagnosed as a case of prolapsed inflamed interno-external hemorrhoids at 3, 7 and 11 o'clock in lithotomy position. There was tenderness of grade 3.

THERAPEUTIC INTERVENTION

Case no. 1 Patient was treated by *Kshara Sootra* trans-fixation at 3,7,11 o'clock.
Case no. 2 Magnesium sulphate local dressing was advised for 1 week after that he was operated for internal external hemorrhoids trans-fixation with *Apamarga Kshara Sootra* at 3,7, 11 o'clock.

RESULT: Ligated piles masses became blackish and necrosed due to *Kshara Sootra* ligation on third post-operative day. On 5th post-operative day, the *Kshara Sootra* was twisted so necrosed piles masses sloughed out and fresh wound was observed. On 7th post-operative day anal dilatation was started with anal dilator no. 6 lubricating with *Jatyadi Ghrita*. On the 15th post-operative day wound was observed in healing stage and there was no sphincter spasm. Wound was completely healed without stricture or any other complication on post-operative 30th day

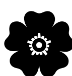
CONCLUSION: *Apamarga Kshara Sootra* has better treatment potential in the management of complicated cases of *Arsha*. This observation needs to be studied in more patients to explore better options for management of complicated cases of *Arsha* (interno-externo haemorrhoids).



Case no. 1 — Fig1: pre-operative; Fig 2: After surgery; Fig 3: post - operative wound after pile mass slough out on 5th day; Fig 4: post-operative wound after 15 days; Fig 5: completely healed wound after 30 days

Case no. 2 — Fig6: pre-operative; Fig 7: After surgery; Fig 8: post - operative wound after pile mass slough out on 5th day; Fig 9: post- operative wound after 15 days; Fig 10: completely healed wound after 30 days

75. Kapadiya Manisha, Dudhamal TS. Role of Kshara Sootra in complicated cases of Arsha (interno-externo haemorrhoids) A case series. Journal of Ayurved Campus (JAC). 2020; 1(1): 61-65. [eISSN:2738-9774 pISSN:2738-9871] www.jacjournal.org
https://www.researchgate.net/publication/350331757_Role_of_Kshara_Sootra_in_complicated_cases_of_Arsha_interno-externo_haemorrhoids_-A_case_series



Management of perineal and perianal warts through Ayurveda: a case report[76]

CASE DESCRIPTION: A 33 year old housewife had complaints of numerous small growths, itching and occasional pain in genital region which hampered her daily routine & caused discomfort. She was apparently normal before 6 months; gradually she noticed small numerous growths in genital area and neglected it for 6 months. She has history of hypothyroidism since 15 years and taking medications for the same. Her menstrual cycle was normal.

ON EXAMINATION: Multiple, non-tender growth of varying sizes were found in perineal and perianal region. Hence, based on clinical findings the case was diagnosed as *Charmakeela*.

INVESTIGATION: All the hematological, biochemical and serological reports were done prior to surgery and found within normal limit.

THERAPEUTIC INTERVENTION: Under aseptic precautions, painting with povidone-iodine solution and draping with sterile cut sheet was done. All the warts were catch-hold one by one with the help of artery forceps and removed with the help of electro-cautery. Proper hemostasis was achieved. After removal of warts *Haridra Churna* was dusted. Wound was packed with dry gauze pieces.

POST-OPERATIVE MEASURES: Patient was advised to take sitz bath with *Panchvalkala Kwath* two times a day and daily aseptic dressing with *Thumari Taila*. Orally two tablets (500mg each) *Triphala Guggulu* thrice a day with lukewarm water was advised for one month. Patient was advised to maintain local hygiene, and to avoid coitus till complete healing of post-surgical wound.

RESULT: Patient got complete relief from itching and pain after removal of the warts. Wound healing was observed from the 8th post-operative day. Wound was healed completely within 3 weeks with minimal scar formation. Patient was followed up fortnightly for 8 months, and no signs of recurrence or scar marks were found.

CONCLUSION: Perineal and peri-anal warts are very common disease found in females which does not have any definite line of management in modern parlance. In such cases Ayurveda can provide cost effective, minimal invasive management which can improve quality of life of the patient with no recurrence and minimal complications. As very fewer studies were found on the management of warts, it may require more extensive works on such cases to draw definitive conclusions.

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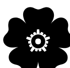
76. Pragna Baria, Dudhamal TS. Management of Perineal and Perianal warts Through Ayurveda: A Case Report. AYUSHDHARA, 2020;7 (Suppl 1):85-88. [ISSN: 2393-9583 (Print) ISSN: 2393-9591 (Online)] www.ayushdhara.in

https://www.researchgate.net/publication/347416458_MANAGEMENT_OF_PERINEAL_AND_PERIANAL_WARTS_THROUGH_AYURVEDA_A_CASE_REPORT



Clinical efficacy of Amroid tablet and Amroid ointment in the management of Arsha (hemorrhoids)-a single-arm open-label clinical trial[77]

PURPOSE: To study the efficacy of Amroid tablet & ointment in the management of hemorrhoids.

MATERIALS AND METHODS:

STUDY DESIGN: This study was an open-label single-arm prospective interventional study of four weeks.

SELECTION OF PATIENTS: Total 144 patients with complaints of ano-rectal pain, inflammation, bleeding per ano, itching per ano, constipation, and prolapsed piles were selected.

INCLUSION CRITERIA: Patients of either gender b/w age of 18-60 years having 1st, 2nd & 3rd degree hemorrhoids & pre-surgical patient of hemorrhoid were included in the study.

EXCLUSION CRITERIA: Patients having congenital hemorrhoids, fibrotic anal stenosis, 4th degree hemorrhoids & complicated hemorrhoids viz thrombosed piles, etc., & hemorrhoid with fistula-in-ano/ano rectal abscess was excluded from the study. Patients with severe anemia (Hb% < 7 gm %) & having concomitant severe systemic disease (cardiovascular, renal, hepatic, endocrine, hematological, neurological, and immunological) were also excluded.

INVESTIGATIONS: CBC, RBS, Bl. Urea; Serum: creatinine, bilirubin, glutamic pyruvic transaminase, glutamic oxaloacetic transaminase, alkaline phosphatase; and lipid profile as well as urine (routine and microscopic), stool (routine and microscopic) were done at baseline and at the end of the study.

DRUG'S ADMINISTRATION (DOSE AND DURATION):
Tablet - Two tablets 3 times a day with plain water orally 1 hour after food for 4 weeks.
Ointment - Per rectal local applications of ointment with applicator or finger before and after defecation in sufficient quantity or maximum 10 gm.

RESULT: On local per rectal examination, 85.41% patients had unhealthy peri-anal skin. Among all patients, 74.31% patients were diagnosed as a case of internal pile mass, 4.86% patients had external piles and 20.83% patients had interno-external piles. Patients with 2nd degree piles were observed maximum 65.20% and 25.69% were observed 1st degree pile mass because in the 2nd degree pile mass patient suffered from per rectal bleeding as well as congestion of the piles may lead to anorectal discomfort which brings the patients to surgeon. At base line 85.41% patients had complaint of pain in ano, 55.56% patients had complaint of bleeding per rectum and 56.25% patients had complaint of itching per ano and 71.53% patients had perianal inflammation.

OVERALL ASSESSMENT: Overall effect of therapy showed that 29.16% patients got complete remission and 63.89% patients showed marked improvement. Moderate improvement was found in 5.56% patients while 1.39% noted with mild improvement. Hence, it can be said that the patients of 1st, 2nd and 3rd degree piles can be managed with Amroid tablet and ointment.

CONCLUSION: Amroid tablet and Amroid ointment has potential to cure hemorrhoids up to third degree. The formulation is easy to use and convenient for consumption without any untoward effect.

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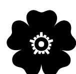
77. Dudhamal TS. Clinical Efficacy of Amroid Tablet and Amroid Ointment in the Management of *Arsha* (Hemorrhoids) - A Single-Arm Open-Label Clinical Trial. Asian Pac. J. Health Sci., 2022;9(1):216-220. [e-ISSN: 2349-0659 p-ISSN; 2350-0964] www.apjhs.com
https://www.researchgate.net/publication/360589589_Clinical_Efficacy_of_Amroid_Tablet_and_Amroid_Ointment_in_the_Management_of_Arsha_Hemorrhoids_-_A_Single-Arm_Open-Label_Clinical_Trial



Management of *Charmakeela* (anal warts) with *Agnikarma* by electrocautery- along with adjuvant Ayurvedic remedies: a case report[78]

CASE DESCRIPTION: A 50 year old male patient had complaints of fleshy hard growth at perianal region which was gradually increasing in size and number along with occasional itching at the affected site since 9 months. He was also feeling discomfort and burning pain in ano for last 15 days. Symptoms got aggravated during sitting and walking. Patient had history of taking tablet combiflam occasionally for the pain. There was no relevant surgical or family history.

ON EXAMINATION: Inspection revealed large crop of papillomatous growth around perianal region from 2 to 5 o'clock and 7 to 11 o'clock. On digital examination moderate tenderness was present, and no other abnormalities were detected. It was diagnosed as *Charmakeela.* All the haematological, biochemical and serological investigations were done prior to procedure and were found within normal limits. Histopathological findings revealed it as a condyloma acuminata.

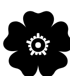
THERAPEUTIC INTERVENTION: Under spinal anaesthesia with all aseptic precautions, wart at 7 o'clock was caught with Babcock forceps and excised with the help of electrocautery/*Agnikarma*. Same procedure was carried out for complete excision of wart circumferentially. Proper haemostasis was achieved and wound was packed. Patient was shifted to ward with normal vitals.

RESULTS: Patient got relief from itching, pain, discomfort and burning sensation at perianal region after excision of warts with electrocautery/*Agnikarma* within six weeks of treatment. Follow up was taken up to 9 months and in this period there was no recurrence, stenosis, stricture and complications found.

CONCLUSION: This study shows Condyloma acuminatum can be managed through *Agnikarma* and Ayurvedic medication without any complications and recurrence, thus improving the quality of life of patient.

Preoperative warts	Post-Operative
Post-Operative Day 10	Post-Operative Day 36

78. Chandran, K., Joshi, P., & Dudhamal, T. (2023, December 25). Management of Charmakeela (Anal Warts) with Agnikarma by electrocautery- along with Adjuvant Ayurvedic Remedies: A Case Report. *International Journal of AYUSH Case Reports*, *7*(4), 557-562.
https://www.ijacare.in/index.php/ijacare/article/view/515



An innovative clinical study of anal stricture and its management with PCA therapy[79]

PURPOSE: To study the efficacy of PCA therapy in cases of anal stricture.

MATERIALS AND METHODS:
STUDY DESIGN: An open labelled randomized clinical trial of 76 patients.
INCLUSION CRITERIA: Patients aged in b/w 5-70yrs of either sex suffering from increasing difficulty with tenesmus in defecation, enhancement in consumption of large doses of mild laxatives., passing of stools in 'pipestem' shape, occasional bleeding with or without mucopus in chronic cases were included.
EXCLUSION CRITERIA: Patients suffering from type-1 DM, and patients with the serious systemic illness like tuberculosis, carcinoma, cardiac disease, and advance stage DM and leprosy, and HIV were excluded from the study. Drug non-responding chronic constipated bowel cases, patients with age below 5 years and above 70 years, obese patients as per standard weight guide and patients suffering from Crohn's disease were also excluded.
INVESTIGATIONS: Routine haematological examinations and biochemical tests were conducted before and after treatment to rule out any pathological conditions.

GROUPING:
GROUP-A (n=24): Application of *Ksharasutra* suture (KSS) once in one sitting after manual anal dilatation followed with introduction of *Jatikshara* oil 10 ml one dose at bed time once into anal canal 24 hourly for 15 days, and oral intake of *Shallaki* tablet of 500mg thrice daily followed by *Maharasnadi Kasaya* 15 ml. Daily one dose *Erandbhrastaharitaki* of 5 gm was given with warm water at bed time to all patients after dinner.
GROUP-B (n=20): Application of *Kshara Malahara* (KM) once daily for 7 days after manual anal dilatation in rotating process around the anus for adult cases with appropriate adult dose. To the children, introduction of 5 ml *Jatikshara* oil into anal canal at bed time was given. With oral intake of *Shallaki* tab 500mg 8 hourly followed by10 ml of *Maharasndi Kasaya* and once daily use of 2 gm of *Erandabhrastaharitaki* with warm water were given.
GROUP-C (n=32): The application of *Ksharasutra* suture once in one sitting after manual anal dilatation was done, and after removal of *Ksharasutra* on 7th day, the *Kshara Malahara* was used in the lesion for one week in rotating manner around the anus was done followed by all the aforesaid managements.

RESULT: In the group C was 98.7% success, in group B 68.8% success, while in group A 84% success was seen. Group C showed the maximum benefit to the patients due to use of both procedures with continuous action taken to remove the stricture lesions from the anal area. Totally 89% cases were cured, while 6.5% cases of group B showed marked improvement after 1st week of treatment, and 2.6% cases of group A had shown moderate improvement while 1% of case got complication of abscess tending to sinus, which was treated immediately under PCA therapy and got cured later on.

CONCLUSION: The group C patients treated with *Ksharasutra* suture (KSS) and *Kshara Malahara* (KM) application had less postoperative pain, and were cured early as compared to other groups. Healing of post-operative wound was within 03 weeks in both groups A & C while it took 04 weeks for group B. No adverse effect of any drug or untoward effects of the PCA therapy were noticed during or after the treatment even up to the follow-up period. Therefore, it can be recommended that the PCA therapy consisting of KSS with KM procedure can be practiced as one of the modalities for the treatment of anal stricture.

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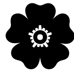
79. Bhuyan C, Dudhamal TS, Lobo SJ. An Innovative Clinical Study of Anal Stricture and its Management with PCA Therapy. IJAMY (Indian Journal of Ancient Medicine and Yoga 2017;10(4):117-124. (pISSN 0974-6986, eISSN 0974-6994). www.rfppl.com
https://www.researchgate.net/publication/322721860_An_Innovative_Clinical_Study_of_Anal_Stricture_and_its_Management_with_PCA_Therapy



A comprehensive study and management of ano-rectal polyps w.s.r. to PCA therapy[80]

PURPOSE: To explore the efficacy of PCA therapy in ano-rectal polyp cases.

MATERIALS AND METHODS:
STUDY DESIGN: An open labelled randomized clinical trial of 108 patients.
DIGNOSIS CRITERIA: Fresh rectal blood with or without stool per rectum, rarely massive but usually occult, mucous discharge, anal polyp, anaemic, rectal polyp on a long pedicle sometimes prolapsed during defecation, and most frequent complaint of cramps or abdominal pain or obstruction.
INCLUSION CRITERIA: Patients aged b/w 5-70yrs of either sex suffering from-single polyp, multiple polyps, piles with polyps, anal fistula with polyp, anal fissure with polyp, piles, fissure in ano, fistula in ano with polyps, controlled diabetic type-2 with polyp, controlled hypertension with polyp, enhancement in consumption of large doses of mild laxatives, and regularly/occasional bleeding with or without mucous in chronic cases were included in the study.
EXCLUSION CRITERIA: Patients suffering from type-1 DM, patients with the serious systemic diseases like tuberculosis, carcinoma, cardiac disease, advance stage DM and leprosy, HIV, psychosis disorders, dementia; drug not responding in chronic constipate bowel; age below 5 years and above 70 years; obese patients as per standard weight guide and patient suffering from Crohn's disease were excluded from the study.

PATHOLOGY AND OTHER INVESTIGATIONS: Routine haematological investigations like diabetic profile includes FBS, PPBS, Hb1Ac, lipid profile, RFT, uric acid, LFT, HIV and biopsy done.

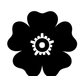
TREATMENT: DRUGS AND POSOLOGY:
Group A: (N = 67) Application of *Ksharasootra* ligation(KSL) and *Kshara* ointment (KO) in piles with polyps in 21 cases; *Ksharasootra* threading (KST) and KSL in anal fistula with polyps in 11 cases; *Ksharasootra* suture (KSS) and *Kshara* Ointment application in anal fissure with polyps in 19 cases; KSL with KST procedures applied in multiple ano- rectal disorders having piles with polyps and anal fistula in 19 cases were done under the PCA therapy modality, once in one sitting, followed with adjuvants of *Jatikalpa* oil-one dose 10 ml, into anal canal-12 hourly, two doses for 2 weeks and administration of *Shalaki* tablet of 500 mg thrice daily followed by *Maharasnadi Kasaya* 15 ml. Daily one dose *Erand Bhrist Haritaki* of 5 gm was given with warm water at bed time to all patients after dinner to clear bowel.

Group B: (N = 41, numbers of only polyp's patients): 27 cases had single polyp whereas 17 cases had multiple polyps. In all of cases of polyps, the application of *Kshara* ointment was applied immediately to crush the polyps, and only application of *KO* was applied for another couple of days to remove the remnant of polyps mass in order to ensure there is no recurrence, followed with posology and managements as mentioned in Group A.

RESULTS: In Group-A there was 99.7% success, and in the Group-B it was 87.8%. Group A showed the maximum benefit to the patients due to integration procedure. Totally 94% cases were cured while 4.5% cases of group B marked improvement after 1st week of treatment and 1.4% cases of group-B had moderately improved while 1% of case got complication of abscess tending to sinus in Group B, which was treated immediately under PCA therapy and got cured later on.

CONCLUSION: These para-surgical procedures under PCA therapy for ano-rectal polyp are safe and non-invasive methods for early recovery, and are a recent research development with cost effective ness & can be practised in minor set up operation theatre. It is an ambulatory therapy where social burdens are free. There is no recurrence of the disease as it treats the root cause of the condition.

80. Bhuyan C, Gupta SK, Dudhamal TS, Lobo SJ. A Comprehensive Study and Management of Ano-Rectal Polyps w.s.r. to PCA Therapy. Indian Journal of Ancient Medicine and Yoga [IJAMY]. 2018;11(2): 55-62.[pISSN 0974-6986, eISSN 0974-6994). www.rfppl.com.
https://rfppl.co.in/subscription/upload_pdf/Chaturbhuja%20Bhuyan_7276.pdf



Effect of Kshara-Karma in Parikartika (acute Fissure-in-ano)[81]

PURPOSE: To evaluate the efficacy of local application of *Apamarga Mridu Kshara* in healing of acute fissure-in-ano cases.

MATERIAL AND METHODS:

STUDY DESIGN: An open labelled clinical trial with three groups of patients receiving different modalities of application of *Apamarga Mridu Kshara* was done.

DIAGNOSTIC CRITERIA: Diagnosis was made on the basis of physical examinations by inspection of position and number of fissures.

INCLUSION CRITERIA: Patients of age group in between 10 to 50 years presenting with complaints of fissure in ano i.e., pain, bleeding per rectum, constipation irrespective of sex, religion, education & socio-economic status were included in this study.

EXCLUSION CRITERIA: Patients with age below 10 and above 50 years suffering from multiple anal ulcers, ulcerative colitis, carcinoma of rectum, tuberculosis, STD, hypertension, diabetes mellitus and cardiac disorders were excluded.

INVESTIGATIONS: Blood investigations like Hb%, TLC, DLC, ESR, BT, CT, FBS, PPBS, VDRL, LFT, RFT, Lipid profile, routined urine analysis and stool examination were done.

TREATMENT:
Group A: *Kshara Lepa* was applied with gloved index finger.
Group B: Soaked gauze piece of *Kshara Tail* was placed.
Group C: *Kshara Tail* followed by *Kshara Lepa*.

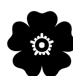
POST OPERATIVE MANAGEMENT (for 14 days):
Avagaha Sweda with warm water and *Sphatikadi Yog,* was done after six hour of each application and *Panchasakar Churna* 5gm at bed time with luke warm water was also given.

FOLLOW UP: 3 months

RESULT:
Group A: The average percentage of improvement in pain during defecation, bleeding per rectum, constipation and spasm after 7 days was 63.33%, 70%, 55.56% and 55% respectively, which was further improved to 90%, 85%, 77.78% and 80% respectively after 14 days.
Group B: The average percentage of improvement in pain during defecation, bleeding per rectum, constipation and spasm after 7 days was 76.67%, 90%, 80% and 90% respectively, which was further improved to 93.33%, 90%, 90% and 95% respectively after 14 days.
Group C: The average percentage of improvement in pain during defecation, bleeding per rectum, constipation and spasm after 7 days was 53.33%, 70%, 66.67% and 85% respectively, which was further improved to 91.67%, 80%, 77.78% and 90% respectively after 14 days.

CONCLUSION: *Kshara-karma* was found to be quite effective in the management of *Parikartika* (fissure-in-ano).

81. T. S. Dudhamal, Chaturbhuja Bhuyan, S. K. Gupta, Surinder Jaiswara. Effect of Kshara-Karma in Parikartika (Acute Fissure in Ano). C. Bhuyan *et al*. Indian Journal of Ancient Medicine and Yoga. July-Sept 2009; Vol. 2 No. 3. (p-ISSN 0974- 6986, e-ISSN 0974 –6994)
https://rfppl.co.in/view_abstract.php?jid=1&art_id=34



A new technique for the treatment of Jeerna Parikartika w.s.r. to chronic Fissure-in - ano[82]

PURPOSE: This study aims at clinical evaluation of *Kshara Sutra* in the management of *Jeerna Parikartika* w.s.r. to chronic fissure in ano.

MATERIAL AND METHODS:

STUDY DESIGN: The present study is an overall clinical assessment done on 867 patients of *Jeerna Parikartika* treated in OPD & IPD of Shalya-Shalakya Tantra department of GAM&H, Puri, Odisha.

DIAGNOSTIC CRITERIA: Diagnosis was made by P/R examination on the basis of position and number of fissure and sentinel tag, spasm of internal sphincter and linear ulcer fibrous bed with indurations of fissure edges.

INCLUSION CRITERIA: Cases of chronic fissure in ano with age in b/w 10 to 50 years, having complaints of anal pain, painful defecation, bleeding per rectum, constipation and linear ulcerative fibrous bed irrespective of sex, religion, education and socio-economic status were considered.

EXCLUSION CRITERIA: Patients of acute fissure i.e., less than one year duration, ulcerative colitis, Ca. rectum, Hypertension, DM and cardiac disorders were excluded.

INVESTIGATION: Blood investigations including Hb%, TLC, DLC, ESR, BT, CT, FBS, PPBS, Blood Urea, Serum Creatinine, VDRL, and routined urine and stool examination were done to exclude any underlying conditions.

PROCEDURE: Under local anesthesia, with all aseptic precautions, 4 fingers anal dilatation was done. Continuous suture were taken at the fissure bed from posterior to anterior keeping one end of Ksharasutra on the fissure bed which supports for tying the other end. After that the round body needle was passed through the sentinel tag and trans-fixation was done.

POST-OPERATIVE: *Panchsakar Churna* 5 gm at night with luke warm water for 7 days was advised.

RESULTS:

Spontaneous removal of Ksharasutra from fissure bed	
No of Day	**No of Patient**
3rd day	470
4th day	215
5th day	182

RESULTS	
Result	**No of Patient**
Cured	838
Complications	29
Total	867

CONCLUSION: Anal fissure is a common disease of anal canal and many studies have recommended conservative and medical treatment for it. Among various medical managements, Ayurvedic practices like *Kshara Sutra* Suturing Treatment (KSST) are considered as one of the modality to combat the situation. In this study after completion of the trial period 96.65% of patients reported complete relief from the disease, and in 3.34% cases complications developed. Comparing the pro and cons of this novel technique it can be further recommended for elaborative studies to establish it as a surgical procedure in the management of *Jeerna Parikartika* or chronic fissure-in-ano.

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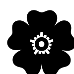
82. Chaturbhuja Bhuyan, T. S. Dudhamal, S. K. Gupta. A new technique for the treatment of jeerna parikartika w.s.r. to chronic fissure in ano. Indian Journal of Ancient Medicine and Yoga Volume 3 Number 3, July-Sep. 2010.
https://www.rfppl.co.in/subscription/upload_pdf/Art%204_57a.pdf



Role of Ksharasutra suturing along with adjuvant therapy in the management of *Parikartika* (Chronic fissure-in-ano)[83]

PURPOSE: The present study aimed to evaluate the effectiveness of parasurgical management of *Parikartika* by *Ksharasutra* under spinal anaesthesia.

MATERIAL AND METHODS:

STUDY DESIGN: This is a prospective clinical study conducted in 50 patients with chronic fissure-in-ano admitted to OPD and IPD of Shalya Tantra associated with IPGTRA, Jamnagar, irrespective of age, sex, occupation, and religion.

DIAGNOSTIC CRITERIA: All the study subjects were diagnosed by extensive clinical examination on the basis of clinical features, local inspection of anorectum and palpation i.e. PR digital examinations.

INCLUSION CRITERIA: All clinically diagnosed patients of chronic *Parikartika* or fissure-in-ano, aged b/w 18-60 yrs with the clinical presentation of fissure bed with or without sentinel tag, pain in ano, per rectal bleeding and history of constipation were included. The study also incorporated the diagnosed patients of *Parikartika* accompanied with *Arsha* (piles) and *Bhagandara* (fistula).

EXCLUSION CRITERIA: Patients suffering from acute fissure-in-ano, carcinoma of ano-rectum, congenital anal stricture and congenital anal stenosis were excluded from this study. And patients who were found to be positive for HIV, VDRL and Hepatitis-B were also eliminated.

LABORATORY INVESTIGATIONS: Routine haemogram (Hb%, TLC, DLC, BT, CT, ESR, FBS, PPBS, RFT- Blood urea, Serum creatinine, Sr. Bilirubin, SGPT, SGOT, HIV, VDRL, HBsAg), Urine Analysis and Stool examination were done for determining the condition of the patients. Other Investigations like Chest X-ray (PA view) and ECG were done in patients of 40 years and above to rule out pulmonary and cardiac cases.

OPERATIVE PROCEDURES: Under spinal anaesthesia, with all aseptic precautions, fissure bed including all fibrous tissue was sutured by continuous suture with the help of round body curved needle of appropriate size, swaged with Ksharasutra (2- 4 bites or as per the need / length of fissure bed). Followed by trans-fixation of sentinel tag was done.

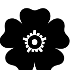
POST-OPERATIVE TREATMENT (for 10 days): this included use of *Sphatikadi Yoga* for sitz bath two times a day, *Vatagajankush Vati* -250 mg three times a day. *Panchasakara Churna* 5gm at night and *Jatyadi taila* (10ml) once a day for per anal installation.

FOLLOW-UP PERIOD: One month.

RESULT: A total of 56% patients achieved complete symptom relief, while 28% patients reported to have improvement in their conditions, 10% patients showed moderate improvement and 6% patients had mild improvement. Hence, all patients reported to have some extent of relief in signs and symptoms as per assessment criteria fixed for required period. And none of the patient claimed to not be benefitted by the procedure.

CONCLUSION: The study reports *Ksharasutra* suturing eventually combined with adjuvant drugs use, as a safe and effective procedure in *Parikartika* management leading to substantial improvements in symptoms.

83. Dudhamal TS, Baghel MS, Bhuyan C, Gupta SK; Role of Ksharasutra suturing along with adjuvant therapy in the management of Parikartika (Chronic fissure-in-ano); International Journal of Ayurvedic Medicine, 2013, 4(1), 77-86 [ISSN: 0976-5921] http://ijam.co.in https://www.researchgate.net/publication/272498665_Role_of_Ksharasutra_suturing_along_with_adjuvant_therapy_in_the_management_of_Parikartika_Chronic_fissure-in-ano



Clinical effect of Lord's Anal Dilatation and Ksharasutra Suturing in Parikartika w.s.r. to chronic fissure-in-ano[84]

PURPOSE: To study the efficacy of Lord's anal dilatation and *Ksharasutra* in *Parikartika*.

MATERIALANDMETHODS:
STUDY DESIGN: An open labelled single armed clinical trial with 50 diagnosed cases of *Parikartika*.

INCLUSION CRITERIA: The patients of *Parikartika* having age b/w 20 to 60 years with symptoms like pain in ano, per rectal bleeding and history of constipation, and patients of *Parikartika* (chronic fissure-in-ano) associated with *Arsha* (piles) and *Bhagandara* (fistula-in-ano) were included in study.

EXCLUSION CRITERIA: The patients who were suffering from acute fissure-in-ano, congenital anal stricture and carcinoma of ano-rectum were excluded from this study. The cases that were positive for HIV, VDRL and Hepatitis-B were also excluded. The patients with diabetes mellitus having chronic fissure-in ano were also excluded from the study.

INVESTIGATIONS: Haemogram for Hb%, TLC, DLC, BT, CT, ESR, FBS, PPBS, RFT- Blood urea, Serum creatinine, HIV, VDRL, HBsAg, LFT- Sr. Bilirubin, SGPT, SGOT; urine analysis for albumin, sugar & microscopic examination, and stool examination for microscopic ova & cyst, RBC, etc.. These investigations were done at base line to assess the fitness of patients for anaesthesia.

PROCEDURE: After Lord's anal dilatation *Apamarga Ksharasutra* Suturing (KSS) at fissure bed followed by trans-fixation of sentinel tag was done under spinal anaesthesia.

POST-OPERATIVE PROCEDURE: *Sphatikadi Yoga* for sitz bath twice daily and *Jatyadi Taila* for per anal instillation with *Vatagajankush Vati* 250 mg TDS and *Panchasakara Churna* 5gm at night.

DURATION: Single stage operation for *Parikartika* with *Ksharasutra* suturing after Lords anal dilatation was done and patients were assessed on weekly interval up to 4 weeks. Follow-up was for one month.

RESULTS: Pain intensity at anal region decreased day by day, and complete pain relief was observed on 14th post-operative day in all 50 patients; while oozing was stopped in all patients in 28 days. Hence, statistically highly significant ($p<0.001$) results was seen for pain and oozing.
In case of wound healing, though statistically significant result were observed in all patients by weekly assessment, but 2 patients had taken more than 28 days for wound healing due to associate disease fistula-in-ano. Total 80% patients were found cured while 18% patients were observed under improvement category and only 2% patients were noted in moderate improvement as per assessment criteria fixed for relief in sign and symptoms.

CONCLUSION: In *Parikartika* (chronic fissure- in-ano), Lord's anal dilatation with *Ksharasutra* suturing is an effective treatment without any untoward effect.

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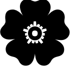
84. Dudhamal TS, Baghel MS, Bhuyan C, Gupta SK. Comparative study of Ksharasutra suturing and Lord's anal dilatation in the management of Parikartika (chronic fissure-in-ano). *Ayu*. 2014;35(2):141-147. doi:10.4103/0974-8520.146219; https://www.researchgate.net/publication/272498535_Original_Research_Clinical_effect_of_Lord's_Anal_Dilatation_and_Ksharasutra_Suturing_in_Parikartika_wsr_to_chronic_fissure-in-ano



Wound healing effect of Jatyadi Taila in the cases of Chronic Fissure-In-Ano treated with Ksharasutra[85]

PURPOSE: To evaluate the wound healing effect of *Jatyadi taila* and other adjuvant drugs in post *Ksharasutra* wounds.

MATERIAL AND METHODS:

STUDY DESIGN: This study is an open labelled clinical trial with 100 patients in 2 groups taken from IPD of Shalya Tantra dept., irrespective of age, sex, occupation & religion.

INCLUSION CRITERIA: Patients aged b/w 16-60 years with post-operative wounds of *Ksharasutra* suturing in *Parikartika* (Chronic fissure-in-ano) were included.

EXCLUSION CRITERIA: Patients of acute fissure-in-ano, carcinoma of ano-rectum, congenital anal stricture, anal stenosis; and positive cases of HIV, VDRL and hepatitisB were excluded.

INVESTIGATIONS: The investigations were carried out for assessing fitness of the patients for *Ksharasutra* suturing includes Hb%, TLC, DLC, BT, CT, ESR, FBS, PPBS, blood urea, serum creatinine. HIV, VDRL, HBsAg, urine and stool examination.

PROCEDURE:
Group-A: *Ksharasutra* Suturing at fissure bed followed by trans-fixation of sentinel tag.
Group-B: Lord's anal dilatation followed by *Ksharasutra* suture at fissure bed with trans-fixation of sentinel tag was done under low spinal anaesthesia. After cut through of the *Ksharasutra* fresh wounds of entire patients were treated with *Jatyadi taila* in following method.
OTHER MEDICATIONS: *Sphatikadi Yoga* for cleaning and sitz bath, and *Vatagajankush Vati* 250 mg tds alongwith *Panchasakara Churna* 5gm at bed time was given orally. Patients were advised to take fiber rich diet and excess fluids from next day of operation.

RESULTS IN GROUP- A: Pain relief and wound healing was achieved by 28 days and oozing had stopped after 21 days of the procedure. Among 100 patients, 4 patients had taken more than 28 days for complete wound healing due to 2 patients had associate disease fistula-in-ano and 2 had develop subcutaneous fistula-in-ano as post-operative complication after Ksharasutra suturing.

RESULTS IN GROUP- B: Pain relief was observed on 14th post-operative day in all 50 patients while oozing stopped in all patients by 28th day. Significant results were observed in wound healing by weekly assessment for all patients except 2 patients who were treated for a prolonged period as they suffered from fistula-in-ano also.

CONCLUSION: 96% of the patients healing after post *Ksharasutra* wound were within 21 days, so *Jatyadi taila* may be considered as an effective medicine for wound healing. Any adverse or untoward effect of the drug was noticed. Hence *Jatyadi taila* may be promoted as a cost effective, simple and effective drug for post *Ksharasutra* wound management in ano-rectal cases.

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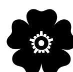
85. Tukaram Dudhamal, Chaturbhuja Bhuyan, Madhavsingh Baghel; Wound Healing Effect of Jatyadi Taila In The Cases Of Chronic Fissure-In-Ano Treated With Ksharasutra; https://www.researchgate.net/publication/277327810_Wound_healing_effect_of_Jatyadi_Taila_in_the_cases_of_chronic_fissure-in-ano_treated_with_Ksharasutra



Role of *Ksharasutra* suturing along with adjuvant therapy in the management of *Parikartika* (Chronic fissure-in-ano)[86]

PURPOSE: To evaluate the role of Ksharasutra suturing (KSS) in the management of *Parikartika* (Chronic fissure-in-ano).

MATERIAL AND METHODS:

STUDY DESIGN: An open labelled single armed clinical trial was done on 50 patients of *Parikartika* (Chronic fissure-in-ano) enrolled from the OPD and IPD of the department of Shalya Tantra, irrespective of age, sex, occupation, and religion.

DIAGNOSTIC CRITERIA: The diagnosis was made on the basis of clinical features and local inspection of anorectum, and palpation i.e. PR digital examinations.

INCLUSION CRITERIA: Diagnosed patients of *Parikartika* (Chronic fissure-in-ano) in b/w age group 16-80yrs having sign and symptoms like fissure bed with or without sentinel tag, pain in ano, per rectal bleeding and history of constipation were included. Diagnosed patients of Parikartika associated with Arsha (piles) and Bhagandara (fistula-in-ano) were also included.

EXCLUSION CRITERIA: Patients who were suffering from acute fissure-in-ano, carcinoma of ano-rectum, congenital anal stricture and congenital anal stenosis patients were excluded from this study. Patients who were positive for HIV, VDRL and Hepatitis-B were also excluded.

INVESTIGATIONS: Routine haemogram: Hb%, TLC, DLC, BT, CT, ESR, FBS, PPBS, RFT, blood urea, serum creatinine, sr. Bilirubin, SGPT, SGOT, HIV, VDRL, HBsAg; urine Analysis and stool examination were done to ensure fitness of patients. Chest X-ray PA view and ECG were carried out in patients over 40 years of age to rule out possibility of pulmonary and cardiac diseases.

PROCEDURE: *Ksharasutra Suturing* (KSS) at fissure bed followed by trans-fixation of sentinel tag was carried out under spinal anaesthesia.

POST-OPERATIVE PROCEDURE: *Jatyadi taila* for per anal installation and *Sphatikadi Yoga* for sitz bath two times a day was advised alongwith oral medications of *Vatagajankush Vati* 250 mg three times a day and *Panchasakara Churna* 5gm at night

RESULTS: 56% patients were cured, while 28% patients showed improvement. 10% patients were developed moderate improvement and 6% patients had mild improvement. Hence, all the patients seemed to experience some relief as per the assessment criteria.

CONCLUSION:

Ksharasutra suturing is an effective procedure in *Parikartika* along with adjuvant drugs without any adverse effect.

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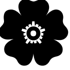
86. Dudhamal TS, Baghel MS, Bhuyan C, Gupta SK; Role of Ksharasutra suturing along with adjuvant therapy in the management of Parikartika (Chronic fissure-in-ano); *International Journal of Ayurvedic Medicine, 2013, 4(1), 77-86* [ISSN: 0976-5921] http://ijam.co.in
https://www.researchgate.net/publication/272498665_Role_of_Ksharasutra_suturing_along_with_adjuvant_therapy_in_the_management_of_Parikartika_Chronic_fissure-in-ano



Comparative study of Ksharasutra suturing and Lord's anal dilatation in the management of Parikartika (chronic fissure-in-ano)[87]

PURPOSE: To compare the efficacy of Ksharasutra procedure only with Ksharasutra and Lord's dilation procedure simultaneously.

MATERIAL AND METHODS:
STUDY DESIGN: An open labelled clinical trial of 100 patients of chronic fissure-in-ano.
DIAGNOSTIC CRITERIA: The diagnosis was made on the basis of external findings like position of fissure and external sentinel tag along with the presence of external piles/and external opening of the fistula.
INCLUSION CRITERIA: Patients b/w age group 16-60 yrs of *Parikartika* having sign and symptoms like fissure bed with/without sentinel tag, pain-in-ano, per rectal bleeding, and history of constipation; *Parikartika* patients associated with *Arsha* and *Bhagandara* were included in the study.

EXCLUSION CRITERIA: Patients who were suffering from acute fissure-in-ano, CA ano-rectum, congenital anal stricture, and congenital anal stenosis were excluded from this study. Positive cases for HIV, VDRL and hepatitis-B were also excluded.

ON EXAMINATION: Digital per rectal examinations was carried out with 2% xylocaine jelly to assess the sphincter tone if the pain was bearable. Proctoscopic examination was performed after giving suitable anaesthesia at the time of operation.

INVESTIGATIONS: Routined haemogram: CBC, BT, CT, ESR, FBS, PPBS, Urea, Creatinine, HIV, VDRL, HBsAG, urine & stool examination were carried out before treatment, to assess fitness of patients for anaesthesia & surgery. Chest X-ray and ECG were carried out in patients above 40yrs.

METHODOLOGY:
Group-A (n=50): *Ksharasutra suturing* (KSS) at fissure bed followed by trans-fixation of sentinel tag was done under suitable anaesthesia.

Group-B (n=50): Lord's anal dilatation followed by KSS at fissure bed with trans-fixation of sentinel tag was done under suitable anaesthesia.

DURATION: Single stage operation for *Parikartika* with KSS was done, and patients were assessed on a weekly interval up to 4 weeks.

RESULTS: In **Group-A:** Pain relief was achieved by 28 days and oozing had stopped after 21 days. A statistically highly significant ($P < 0.001$) result was seen. In case of wound healing, 4 patients required more than 28 days for complete cure, and significant results were obtained. In **Group-B:** Intensity of pain decreased day-by-day and complete pain relief was observed on the 14th postoperative day in all the patients, while oozing was stopped in all patients by 28th day. Statistically highly significant ($P < 0.001$) results were seen in pain and oozing cases.

CONCLUSION: Healing of postoperative wound was within 21 days in both groups. There was no additional infection due to *Ksharasutra* procedure and per rectal instillation of *Jatyadi Taila* helped in early wound healing. Hence, *Ksharasutra* can be used as one of the modalities for the treatment of *Parikartika*.

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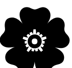
87. Dudhamal TS, Baghel MS, Bhuyan CB , Gupta SK; Comparative study of *Ksharasutra* suturing and Lord's anal dilatation in the management of *Parikartika* (chronic fissure-in-ano); AYU |Apr-Jun 2014 | Vol 35 | Issue 2; [ISSN: 0974-7788] www.ayujournal.org https://www.researchgate.net/publication/270505888_Comparative_study_of_Ksharasutra_suturing_and_Lord's_anal_dilatation_in_the_management_of_Parikartika_chronic_fissure-in-ano



A comparative clinical study of Ksharsutra ligation and lateral internal sphincterotomy in the management of Parikartika (chronic fissure-in-ano)[88]

PURPOSE: To compare the efficacy of *Ksharasutra* ligation & LIS in the management of chronic fissure-in-ano.

MATERIALS AND METHODS:
STUDY DESIGN: An open labelled randomized clinical trial on 30 patients of *Parikartika* (chronic fissure-in-ano), irrespective of their age, gender, occupation and religion.
DIAGNOSTIC CRITERIA: The patients were diagnosed on the basis of history, signs and symptoms, local examination with digital per rectal examination. Digital per rectal examination was carried out with 2% Xylocaine jelly to assess the sphincter tone after assessing the tolerance of pain and consent of patient. Proctoscopic examination was done after giving suitable anaesthesia at the time of operation to exclude other anorectal pathologies like piles, polyp, any growth, etc.

INCLUSION CRITERIA: Patients of age group between 17-60 years of *Parikartika* (chronic fissure-in-ano) having duration more than 6 months were included in the study.

EXCLUSION CRITERIA: Patients of fissure-in-ano with less than 6 months duration, chronic fissure-in-ano associated with piles & fistula, malignancy of anorectum or any other organs were excluded. Positive cases for HIV, VDRL, hepatitis-B and uncontrolled cases of DM and hypertension were also excluded.

INVESTIGATIONS: Routine haemogram, B.T., C.T., FBS, PPBS, Bl. urea, Sr. Creatinine, Sr. bilirubin (T), Sr. glutamic oxaloacetic transaminase, Sr. glutamic pyruvic transaminase, HIV, VDRL, HBsAg, urine analysis: albumin, sugar, & microscopic were carried out. Chest X-Ray, ECG, USG abdomen & pelvis were done in cases of age above 40 years for fitness.

GROUPING:
GROUP-A (n=15): Patients were treated by standard *Apamarga Ksharsutra* ligation with transfixation of sentinel tag with maximum possible anal dilatation under local anaesthesia.
GROUP-B (n=15): Patients were treated by Lateral Internal Sphincterotomy followed by excision of sentinel tag under local anaesthesia.

POST-OPERATIVE TREATMENT: *Panchwalkala Kwatha* for sitz bath, *Jatyadi Taila Matrabasti* and 5 gm *Erand Bhrishta Haritaki Churna* (at bed time with luke warm water) were given in both groups for 4 weeks.

RESULT: All the patients of both treatment arms were completely cured, which indicates 100% relief by both the procedure and there was no statistical difference on the post-operative complains between both the groups. Mean±SD time for relive the post-operative wound healing for Group A was 24.60 ±5.9 days and for Group B was 22.13 ±6.4 days.

CONCLUSION: The Lateral Internal Sphincterotomy with excision of skin tag is more effective treatment modality than *Ksharsutra* ligation with maximum possible anal dilatation in the management of *Parikartika* (chronic fissure-in-ano).

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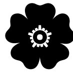
88. Bhadja M, Dudhamal TS. A Comparative clinical study of Ksharsutra ligation and Lateral Internal Sphincterotomy in the management of Parikartika (Chronic Fissure-in-Ano). International Journal of Pharmaceutical & Biological Archives (IJPBA) 2017; 8(6): 42-47. [ISSN 0976- 3333] www.ijpba.info
https://www.researchgate.net/publication/322655627_A_Comparative_clinical_study_of_Ksharsutra_ligation_and_Lateral_Internal_Sphincterotomy_in_the_management_of_Parikartika_Chronic_Fissure-in-Ano



A comparative clinical study of Yashtimadhu Ghrita and lignocaine-nifedipine ointment in the management of Parikartika (acute fissure-in-ano)[89]

PURPOSE: To compare the efficacy of *Yashtimadhu Ghrita* & lignocaine-nifedipine ointment use in acute fissure-in-ano.

MATERIAL AND METHODS:

STUDY DESIGN: An open labelled randomized clinical trial on 36 patients having signs and symptoms of *Parikartika* (acute fissure-in-ano) i.e., pain, bleeding, linear ulcer at either anterior or posterior part of anus and constipation.

INCLUSION CRITERIA: Patients of age group 17-60yrs having acute fissure-in-ano (i.e., less than 12 weeks duration), and patients of fissure with controlled cases of diabetes mellitus or hypertension were included in this study.

EXCLUSION CRITERIA: Patients of acute fissure-in-ano having duration more than 12 weeks, patients below 17 years and above 60 years of age, patients suffering from malignancy of any organ or ano-rectum, positive cases of HIV, VDRL, hepatitis-B, and tuberculosis were excluded from this study. Patients of fissure-in-ano associated with piles and fistula or patients having multiple fissures were also excluded. Uncontrolled cases of diabetes mellitus and hypertension were also excluded from this study.

INVESTIGATIONS: Haemogram, fasting blood sugar, postprandial blood sugar, renal function test: blood urea and serum creatinine, Liver function test: serum bilirubin (T), serum glutamic oxaloacetic transaminase, serum glutamic pyruvic transaminase, HIV, VDRL, HBsAg, urine analysis:albumin, sugar, and microscopic examinations were done.

GROUPING:

Group A (n = 18): Local application of *Yashtimadhu Ghrita* in fissure bed (*Parikartika*) twice a day after sitz bath for 4 weeks

Group B (n = 18): Local application of lignocaine–nifedipine ointment in fissure bed (*Parikartika*) twice a day after sitz bath for 4 weeks

COMMON TREATMENT IN BOTH GROUPS: *Panchvalkala Kwatha* (decoction) were used for *Avagaha Swedana* (Sitz bath) for 1 month in both groups. Prepared *Kwatha* (decoction) was mixed with warm water in the plastic tub and the patient was asked to sit for 10-15 min daily for two times as external use. *Erandbhrushta Haritaki* 5 gm at bedtime with lukewarm water daily was prescribed in the patients who reported constipation in both groups.

RESULT: All patients of both groups had got complete relief in bleeding P/R within 14 days. In Group A as well as in Group B, complete relief in bleeding P/R was found on 14 days. There was no statistically significant difference in number of days required for relief in bleeding P/R. Serous discharge from ano showed 100% relief after 7 days.

CONCLUSION: *Yashtimadhu Ghrita* as well as lignocaine–nifedipine ointment was found to be equally effective for symptomatic relief in the management of *Parikartika* (acute fissure-in-ano). In lignocaine-nifedipine ointment cases some minor complications were noted.

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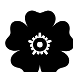
89. Patel J, Dudhamal TS A comparative clinical study of Yastimadhu ghrita and lignocaine- nifedipine ointment in the management of Parikartika (acute fissure in ano) AYU. 2017; 38(1-2):46-51. [ISSN: p-0974-8520 e-0976-9382] www.ayujournal.com
https://www.researchgate.net/publication/324650905_A_comparative_clinical_study_of_Yashtimadhu_Ghrita_and_lignocaine-nifedipine_ointment_in_the_management_of_Parikartika_acute_fissure-in-ano



Ksharasutra transfixation and ligation in the surgical management of chronic fissure-in-ano - a case report[90]

CASE DESCRIPTION: A 61 year old male patient weighing 80kg had complaints of burning pain in ano since 1 month, feeling of mass in ano since 6 months and constipation since 1 year. Patient was also suffering from white patches all over the body, resembling leucoderma. No past history of diabetic mellitus or hypertension or any other medical or surgical history was present. Surgeon advised surgery which may have led to fistula, so patient opted for Ayurvedic treatment.

ON EXAMINATION: Acute fissure at anterior and posterior aspect of anal canal and associated external sentinel pile at 6 and 12 o'clock position. Per rectal digital examination with lignocaine jelly noted the fissure bed, spasmodic sphincter tone and multiple anal papilla at 3, 7, 9 and 11 o'clock position. Proctoscopy examination also showed big anal papilla at 3, 7, 9 and 11 o'clock position with no evidence of fistula in ano or internal piles.

INVESTIGATION: Routine hematological, biochemical and microbiological investigation were carried out and found normal. X-ray chest, ultrasonography and electrocardiography were done to check medical fitness. Vitals of the patient were checked pre-operatively and found that blood pressure was 144/80 mm of Hg, pluse100/min and respiration 24/min.

THERAPEUTIC INTERVENTION: Big internal papilla at 3, 7, 9 and 11 o'clock position. Application of Ksharasutra was done after incising the skin around the external pile, and separating all the fibers of external sphincter. Same procedure was done in hypertrophied anal papilla at 3, 7, 9 and 11 o'clock position. The extra part of sentinel pile was excised after the *Ksharasutra* trans fixation and ligation. And wound was dressed after proper hemostasis. After slough out of *Ksharasutra* patient was discharged, and follow up for dressing was done on every alternate day initially, and later on weekly basis.

Luke warm water sitz bath along with *Panchwalkal Kwatha* two times a day was advised for 5-10 minute. After that 10 ml *Jatyadi Taila Matra Basti* was given once daily. *Erandbhrishta Haritaki churna* 5 gm with luke warm water was given daily at bed time as laxative.

RESULT: The *Ksharasutra* sloughed out on an average on the 5th post-operative day, and the wound remained healthy with granulation tissue. No major complications were noticed during and after the procedure. No recurrence was found after 6 months of follow up, and the patient was satisfied by the procedure. After 7th and 14th post-operative day wound was healthy; it healed between 21st to 30th post-operative days and also the sphincter was relaxed.

CONCLUSION: In chronic fissure-in-ano with sentinel pile application of *Ksharasutra* is safe and easy to perform. Hence, it serves as a good alternative to surgery as there are minimum complications, and recurrence rate is also almost negligible. Hence, this parasurgical procedure is a good and cost effective substitute to manage chronic fissure-in-ano (*Parikartika*).

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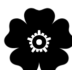
90. Banothe GD, Dudhamal TS. Ksharasutra Transfixation and Ligation in the Surgical Management of Chronic Fissure In-Ano - A Case Report. International Ayurvedic Medical Journal. 2019; 7 (8): 1435-1437. [e.ISSN: 2320 5091] www.iamj.in Impact Factor: 5.344.
http://www.iamj.in/posts/images/upload/1435_1437.pdf



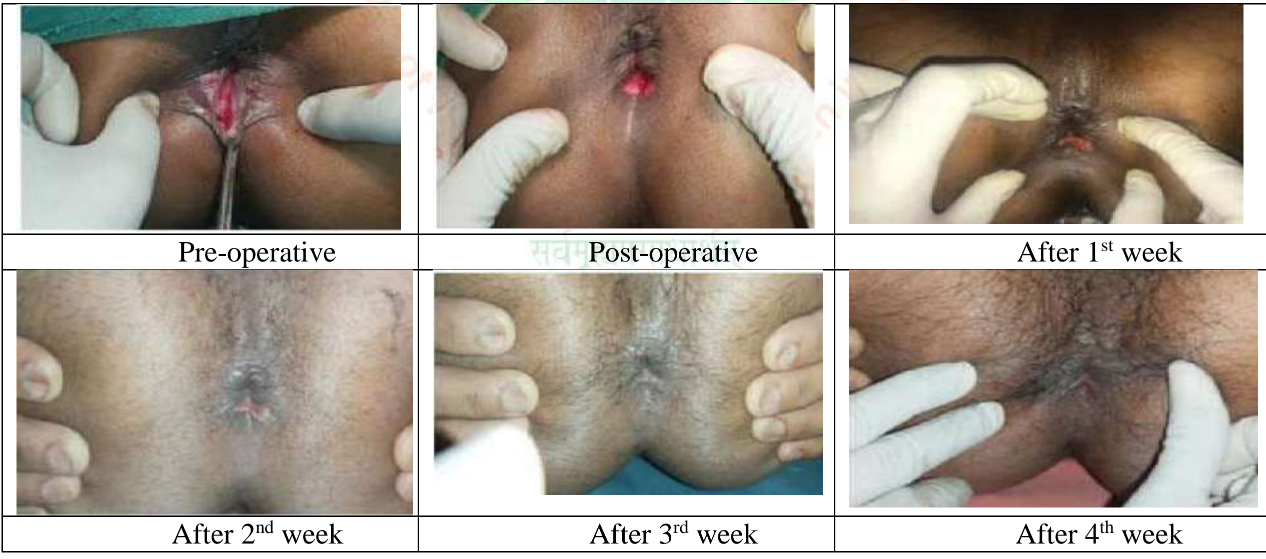
Management of post-operative wound of Parikartika (Chronic Fissure in Ano) by Seethodaka Thaila Pichu followed by dorsal sphincterotomy: a single case report[91]

CASE DESCRIPTION: A 40 year old male patient had complaints of pain and burning sensation during and after defecation for last 2 months. According to patient's complaints he was suffering from constipation since last 2 to 3 years. During that period, he had mild bleeding per rectum as drops and felt external sentinel piles in perianal region.

ON EXAMINATION: On PR examination findings, it was found that there was an acute on chronic fissure with sentinel tag, at 6 o'clock position.
INVESTIGATION: After baseline investigation and fitness examinations, patient undergo dorsal sphincterotomy under spinal anesthesia.
THERAPEUTIC INTERVENTION: After hot sitz bath of *Panchavalkala Kwath*, and post-operative wound cleaning with normal saline the wound was then packed with *Seethodaka Thaila Pichu*.

RESULT: Post-operative fissure wound completely healed within four weeks without any recurrence. No other complaints were registered during the follow up period of 2 months.

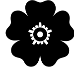
CONCLUSION: Till now there is no satisfactory method of treatment: medical or surgical, for *Parikartika* (fissure-in-ano), a very painful condition of the ano-rectal region. In these cases pain being the main contributing factor for the spasm of anal sphincters, its relief should be addressed promptly. In this study pain was relieved effectively by *Seethodaka Thaila Pichu* use, which accelerated the process of healing of ulcer, and contributed to the complete cure of the condition. Complete healing of the post-operative wound was within 3-4 weeks. No recurrence was noticed in this patient during the follow up of the period of 2 months. Hence, it may be said that this drug is safe, easy to apply and well tolerable in cases of post-operative wounds with prompt healing properties.



Pre-operative | Post-operative | After 1st week

After 2nd week | After 3rd week | After 4th week

91. PG Tilak Prasantha Kumara, TS Dudhamal, Joyal Patel. Management of Post-operative Wound of Parikartika (Chronic Fissure in Ano) by Seethodaka Thaila Pichu Followed By Dorsal Sphincterotomy: A Single Case Report. Indian Journal of Ancient Medicine and Yoga. 2019;12(4):159– 162. [pISSN 0974- 6986, eISSN 0974 - 6994] www.rfppl.co..in
https://www.rfppl.co.in/subscription/upload_pdf/PG%20Tilak%20Prasantha%20Kumara%205_9978.pdf



Integrated Treatment Protocol with Dorsal Sphincterotomy and Local Application of Seethodaka Thaila in the Management of Parikarthika (Chronic Fissure in Ano)-A Pilot Study[92]

CASE DESCRIPTION

Case No.	Age & Gender	Complains & duration	Site of Fissure	Presence of Papilla	Presence of Sen. Tag
1.	40years Male	Pain & Burning since 3/12 BPR as drops-2/12 Constipation on/off -since 4ys	6 o'clock	No	Yes
2.	42years Female	Pain & Burning 1y BPR as streak 6/12 Constipation on/off -since 6ys	6 o'clock	Yes	Yes
3.	38years Male	Pain & Burning,1/12 BPR as drops -1/12 Constipation - 3ys	6 o'clock	No	Yes
4.	40years Male	Pain & Burning,3/12 BPR as streak-3/12 Constipation on/off -since 5ys	6 o'clock	Yes	Yes
5.	49years Male	Pain & Burning 9/12 BPR as drops 3/12 Constipation 1y	6 o'clock	Yes	Yes
6.	35years Female	Pain & Burning 3/12-5/12, No BPR Constipation 6/12	6 o'clock	No	Yes
7.	30years Female	Pain, Burning & BPR drop wise since 15days Constipation 2ys	6&12 o'clock	No	Yes
8.	34years Male	Pain & Burning1/12, BPR as drops 10days Constipation 4-5ys	6&12 o'clock	No	Yes
9.	32years Female	Pain, Burning & BPR on/off as streak, since more than 1yr. Constipation 7ys	6 o'clock	Yes	Yes
10.	30years Female	Pain & Burning, since 3weeks, BPR since 2weeks Constipation 2ys	6 o'clock	No	Yes

THERAPEUTIC INTERVENTION

Dorsal Sphincterotomy: After spinal anaesthesia, patient laid in lithotomy position and painting, draping was done. Excision of sentinel tag with fissure bed and also papilla was done if available. Then identified the internal sphincter through that excision and the internal sphincter was divided with electric cautery. After achieved haemostatic, wound packed with *seethodaka* oil and dressed.

Wound Dressing: From the post-op day second, patient was advised daily warm water sitz bath mixed with *Pancha Valkala Kwatha.* Then the post-operative wound was cleaned with NS (Normal Saline) and packed with *Seethodaka taila* by using sterile gauze piece. The dressing was done once daily for four weeks.

RESULT & CONCLUSION

Integrated approach in chronic fissure with dorsal sphincterotomy and local management with *pancha valkala kwatha* sit bath and *seethodaka thaila* local application is good treatment protocol. No recurrence was noticed in these patients during the follow up period of 1 year.

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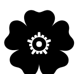
92. Kumara PGTP, Dudhamal TS. Integrated Treatment Protocol with Dorsal Sphincterotomy and Local Application of *Seethodaka Thaila* in the Management of *Parikarthika* (Chronic Fissure in Ano)-A Pilot Study. Journal of Natural and Ayurvedic Medicine 2020, 4(2): 1-8. [ISSN :2578-4986] www.medwinpublishers.com https://medwinpublishers.com/JONAM/JONAM16000244.pdf



Apamarga Ksharasutra application and open lateral internal sphincterotomy in the management of Parikartika (chronic fissure-in-ano): a randomized controlled clinical trial[93]

PURPOSE: To compare the efficacy of *Apamarga Ksharasutra* application with transfixation of sentinel tag and OLIS followed by excision of sentinel tag in *Parikartika* (chronic fissure-in-ano) done under suitable anesthesia.

MATERIAL AND METHODS:
STUDY DESIGN: An open labelled randomized controlled clinical trial.

SELECTION OF PATIENTS: Patients of *Parikartika* (chronic fissure-in-ano) having signs and symptoms like, pain in ano, bleeding per rectum and constipation, were selected irrespective of gender, occupation and religion. The registered patients were randomly allocated into two groups by computer randomization method.

EXAMINATION: On local examination, chronic fissure with skin tag was found; and on per rectum digital examination, spasm of sphincter was noted. Proctoscopy examination was done after giving suitable anesthesia at the time of operation to exclude other anorectal pathologies such as piles, polyp, and any other growth.

INCLUSION CRITERIA: Patients of *Parikartika* (chronic fissure-in-ano) aged in b/w 18-60 years, having chronicity more than 6 months, and associated with *Arsha* (piles) or *Bhagandara* (fistula-in-ano) were included in this study.

EXCLUSION CRITERIA: Fissure-in-ano having chronicity of <6 months, and patient suffering from malignancy of any organs were excluded. The patients who were suffering from acute fissure-in-ano, congenital anal stricture or carcinoma of ano-rectum were also excluded from study. Positive cases of human immune deficiency virus (HIV), venereal disease research laboratory (VDRL) and hepatitis-B were excluded. In this trial, uncontrolled cases of diabetes mellitus, uncontrolled hypertension and patients of tuberculosis were also excluded.

METHODS
Group A: *Apamarga Ksharasutra* application with transfixation of sentinel tag was done under suitable anesthesia.
Group B: OLIS followed by excision of sentinel tag was done under suitable anesthesia.

RESULT: Patients of group A required an average of 10.86 days, while in patients of group B an average of 9.73 days were required for relief in post-operative pain, which shows that group B (OLIS) was better than group A (K. S. application) in treatment of *Parikartika.*
Out of 30 patients of *Parikartika*, 50% of patients were cured and 30% of patients had marked improvement. Moderate and mild improvement was noted in 6.67% of cases respectively. 6.67% cases did not show any relief.
Complication was reported in two patients. In group A, complication was reported as skin tag in one patient and in group B subcutaneous fistula was seen in one patient. These patients were treated accordingly, i.e., excision of skin tag and fistulectomy of subcutaneous fistula respectively.

CONCLUSION: Open lateral internal sphincterotomy with skin tag excision is more effective procedure than *Ksharasutra* application with anal dilatation in the management of *Parikartika* (chronic fissure-in-ano).

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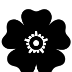
93. Nakrani HL, Dudhamal TS. Apamarga Ksharasutra application and open lateral internal sphincterotomy in the management of Parikartika (chronic fissure-in-ano): A randomized controlled clinical trial. AYU 2019;40:164-70. [ISSN: p-0974-8520 e-0976-9382] www.ayujournal.com
https://www.researchgate.net/publication/343515413_Apamarga_Ksharasutra_application_and_open_lateral_internal_sphincterotomy_in_the_management_of_Parikartika_chronic_fissure-in-ano_A_randomized_controlled_clinical_trial



Management of chronic fissure-in-ano by Ksharasutra (medicated thread): a clinical prospective study[94]

PURPOSE: To study the efficacy of Ksharasutra in the management of chronic fissure-in-ano.

MATERIAL AND METHODS:
STUDY DESIGN: An open labelled single armed prospective clinical trial on 50 patients of *Parikartika*.

INCLUSION CRITERIA: Diagnosed patients of both sex, aged b/w 18- 60 years with *Parikartika,* having sign and symptoms like fissure bed with sentinel pile, pain in ano, per rectal bleeding, history of constipation were included in the study after taking informed consent.

EXCLUSION CRITERIA: Fissure-in-ano having duration less than 6 weeks, chronic fissure in-ano associated with piles and fistula, patient below 18 and above 60 years of age, patients who were suffering from acute fissure-in-ano, carcinoma of ano-rectum were not included in this study. Patients suffering from infections like HIV, VDRL and hepatitis-B were also excluded.

DIAGNOSIS CRITERIA: Patients were diagnosed on the basis of signs and symptoms as per Ayurved and modern literature i.e. *Vedana, Malabadhhata* and *Raktasrava;* & also on the basis of external findings like position of fissure and external sentinel pile. Digital per rectal examinations were performed with 2% xylocaine jelly to assess the sphincter tone. Proctoscopic examination was performed after giving appropriate anesthesia at the time of surgery.

INVESTIGATIONS: Routined blood investigations like CBC, urine microscopy/macroscopic tests, BSL (blood sugar levels), KFT (kidney function test), HIV, VDRL, HBsAg and stool examination were carried out prior to the treatment for assessing fitness of the patients for surgery & anesthesia. Chest X-ray & ECG were carried out in patients over 40 years.

THERAPEUTIC INTERVENTION: Standard A*pamarga Ksharasutra* application with *Panchavalkala Kwatha* for sitz bath, *Eranda Bhrishta Haritaki Churna* 5 g at night, *Triphala Guggulu Vati* and *Jatyadi Taila Pichoo* (cotton swab soaked in oil) for local holding over the anal region was given. *Ksharasutra* trans-fixation and ligation (KSL) of sentinel pile with fissure bed was done under suitable anaesthesia.

RESULT: Pain relief was achieved by 28 days in all patients; swelling and oozing had stopped after 14 days. Statistically highly significant ($P < 0.001$) result was observed on weekly assessments. In case of wound healing, 6 patients required more than 28 days for complete cure, and statistically significant results were seen in these cases o weekly assessments. The percentage of pain relief on 14th day was 86%.

CONCLUSION: In *Parikartika* (chronic fissure-in-ano with sentinel pile and anal papilla) *Ksharasutra* ligation is a good alternative to modern surgery as it causes less postoperative pain and is easy to perform. Wound remains healthy after slough out of *Ksharasutra,* and average healing time of postoperative wound was found to be within 21 days. There are no instances of any complications like bleeding or infection; and also recurrence rate was almost negligible in this procedure. Hence, it may be assumed as a better alternative to manage chronic fissure-in-ano.

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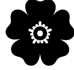
94. Banothe GD, Dudhamal TS, Management of Chronic Fissure-in-ano by Ksharasutra (Medicated Thread): A Clinical Prospective Study. IJRAP 2020; 11(4): 45-49. [ISSNe-2229-3566 p- 2277-4343] www.ijrap.net.

https://www.researchgate.net/publication/343925786_MANAGEMENT_OF_CHRONIC_FISSURE_IN_ANO_BY_KSHARASUTRA_MEDICATED_THREAD_A_CLINICAL_PROSPECTIVE_STUDY



Effect of Mahayavanala Roma Kshara and Dhanyaka Gokshura Ghrita in benign prostatic hyperplasia[95]

AIM AND OBJECTIVES: To compare the effects of *Mahayavanala Roma Kshara* and *Dhanyaka Gokshura Ghrita* in the management of *Vatastheela*, w.s.r. to benign prostatic hyperplasia.

SELECTION OF PATIENTS: Total 15 patients having sign and symptoms of *Vatastheela*/BPH, were selected irrespective of religion, occupation, caste, etc.

DIAGNOSTIC CRITERIA: Diagnosis was based on the clinical signs and symptoms of BPH. Subjective parameters were based on International Prostate symptoms Score and objective parameters (e.g. size of the gland, residual urine volume) for diagnosis.

INCLUSION CRITERIA: Age range of 40-70 years. Patients having signs and symptoms of *Vatastheela*/BPH.

EXCLUSION CRITERIA: Patients below 40 years and above 70 years of age. Patients having systemic diseases like tuberculosis, hypertension, renal failure, diabetes mellitus, urinary calculi and carcinoma of prostate.

GROUPING:
GROUP A: *Mahayavanal Roma Kshara* capsules 500mg BD orally with lukewarm water before meals, for 45 days

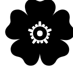
GROUP B: *Dhanyak Gokshura Ghrita* 10gm BD orally with lukewarm water before meals for 45 days.

RESULTS:

Symptoms	GROUP A (Mean Score)		GROUP B (Mean Score)	
	BT	AT	BT	AT
Incomplete voiding	05	03	4.44	3.22
Frequency	3.83	2.17	4.56	3.56
Intermittency	4.56	2.78	4.56	2.78
Hesitancy	2.83	1.5	04	1.89
Urgency	03	1.17	2.78	1.33
Nocturia	2.83	1.83	3.44	2.11
Straining	2.16	0.67	3.89	03
Weak urine stream	3.17	1.67	3.44	1.44
Residual urine volume	33.11	22.63	73.47	32.71
Urine flow rate	4.75	5.47	3.89	4.68
Prostate volume	47.33	37	52.04	41.09

CONCLUSION:
Mahayavanal Roma Kshara had better effect on the objective parameters whereas *Dhanyak Gokshura Ghrita* showed better effect on the subjective parameters.

95. Vasava YR, Bhuyan C, Rajagopala M, Gupta SK, Dudhamal TS. Effect of Mahayavanala Roma Kshara and Dhanyaka Gokshura Ghrita in benign prostatic hyperplasia. *Ayu*. 2010;31(3):332-337. doi:10.4103/0974-8520.77168 www.ayujournal.org
https://www.researchgate.net/publication/51844157_Effect_of_Mahayavanala_Roma_Kshara_and_Dhanyaka_Gokshura_Ghrita_in_benign_prostatic_hyperplasia



Gokshuradi Vati and Dhanyaka-Gokshura Ghrita Matra Basti in the management of benign prostatic hyperplasia[96]

PURPOSE: The present clinical trial was conducted to assess and compare the efficacy of *Gokshuradi Vati* and *Dhanyaka-Gokshura Ghrita Matra Basti*, together with their combined therapy in the management of Benign Prostrate Hyperplasia (BPH).

MATERIAL AND METHODS:

STUDY DESIGN: This is an open labelled clinical trial with three groups. Simple randomization process in a 1:1:1 fashion into three groups was adopted for 32 male subjects with symptomatic *Mootraghata* (which resembled lower urinary tract symptoms-LUTS and bladder outlet obstruction-BOO) or BPH.

DIAGNOSTIC CRITERIA: Diagnosis was based on clinical presentation of *Mootraghata Lakshanas* as per classical texts, digital rectal examination (DRE) or ultrasound KUB (Kidney-Ureter-Bladder) and prostate.

INCLUSION CRITERIA: Eligible patients were men b/w 50-80yrs of age with symptomatic BPH.

EXCLUSION CRITERIA: This included patients not falling under the age limit, and those having disorders like: malignancy, congenital deformities of urogenital tract, and systemic diseases like uncontrolled hypertension, diabetes mellitus, liver, renal, cardiac diseases.

GROUPING AND POSOLOGY:

Group A: *Gokshuradi Vati* 500 mg was administered orally three times per day with luke-warm water 30 min. after food intake.

Group B: 60ml of *Gokshura-Dhanyaka Ghrita* was administered as *Matra Basti* once a day just after lunch.

Group C: Combined therapy of *Gokshuradi Vati* and *Gokshura-Dhanyaka Ghrita Matra Basti* was administered as per aforesaid schedule.

- Total duration of therapy in each group was of 21 days; and follow-up period was of 1 month for each group.

RESULTS: Efficacy was evaluated on the basis of International Prostate Symptom Score (IPSS) for subjective criteria; for objective criteria improvement assessment was done by testing changes in Average urine flow rate (AUFR), and by USG findings on weight of prostate and in Post-voidal residual urine volume (PVUR). As per the analysis group C showed better improvement in objective parameters (36.41%) than group A (20.90%) and group B (26.70%). In the same manner in case of subjective parameters also group C showed percentage wise better results, i.e. 56.33% over other groups i.e., group A (51.50%) and group B (51.60%).

Table 1: Comparative mean effect of therapy in percentage (*n*=30)

Parameters (*n*=10)	Effect over subjective parameters (%)	Effect over objective parameter (%)	Overall average effect of therapy (%)
Group A	51.50	20.90	45.67
Group B	51.60	26.70	47.99
Group C	56.33	36.41	54.09

CONCLUSION: Significant improvement in symptoms, urinary flow parameters and USG results show the effectiveness of combined therapy of *Gokshuradi Vati* and *Gokshura-Dhanyaka Ghrita Matra Basti* in the treatment of *Vriddhavastha-Janya Mootraghata* i.e. BPH.

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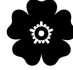
96. Bhalodia SG, Bhuyan C, Gupta SK, Dudhamal TS. Gokshuradi Vati and Dhanyaka-Gokshura Ghrita Matra Basti in the management of Benign Prostatic Hyperplasia. *Ayu*. 2012;33(4):547-551. doi:10.4103/0974-8520.110532.http://www.ayujournal.org
https://www.researchgate.net/publication/236978230_Gokshuradi_Vati_and_DhanyakaGokshura_Ghrita_Matra_Basti_in_the_management_of_Benign_Prostatic_Hyperplasia



Dhanyaka Gokshura Ghrita Matra Basti in the management of Benign Prostatic Hyperplasia-a case study[97]

CASE DESCRIPTION: A 73 year old male patient, of *Vatakaphaja Prakriti* had complaints of incomplete emptying, frequency of micturition, urgency and weak stream. Patient had all these complaints since last 3 years and gradually became severe as per IPSS score. Patient was also suffering from recurrent attack of retention of urine and required catheterization for two times.

ON EXAMINATION: The per rectal (P/R digital) findings were suggestive of enlargement of left lobe, round shaped, smooth surface, upper border approachable, median groove palpable, fixed mobility, tenderness absent, free rectal mucosa, soft consistency and mild enlargement prostate size.

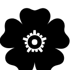
INVESTIGATION: USG, Post-void residual urine (PVRU) volume, manual measurement of Urine flow rate and haematological investigations like blood urea, serum creatinine, serum PSA, serum testosterone was done.

THERAPEUTIC INTERVENTION: Patient was kept nil orally before administration of *Matra Basti*. Patient was asked to lie in left lateral position on table. The luke warm 60 ml DGG was then administered slowly and steadily through rectal route with plastic syringe and rubber catheter. After that the patient was advised to lie down in left lateral position for 10 minutes. The *Matra Basti* was given daily for 21 days.

RESULT: The IPSS score before treatment was 25 with poor quality of life. After completion of the treatment with *Dhanyaka Gokshura Ghrita Matra Basti,* IPSS score was reduced to zero i.e. patient was found to be asymptomatic with good quality of life.
The size of prostate before and after treatment was 56 cc in USG findings. As there was no structural change noted in USG it may be assumed that the treatment can stop further growth of prostrate. In USG Post Voidal Residual Urine Volume (PVRU) before treatment was 25 cc, which was reduced to 20 cc so it can be said that the function of detrusor muscle was improved by *Matra Basti*.
The Average Urine Flow Rate was measured manually and was observed 0.66 ml/sec before treatment. The normal Average Urine Flow Rate is 15ml/sec which was reduced in BPH. After completion of treatment it was increased to 2.33 ml/sec.
The serum PSA (Prostate Specific Antigen) was reduced after treatment (from 3.06 ng/ml to2.69 ng/ml) which showed the effect of therapy. The serum testosterone is decreased in patients of BPH, which was 3.68 ng/ml before treatment and was increased to 6.06 ng/ml after treatment which proved effect of drugs and *Matra Basti*. The blood urea and serum creatinine was also decreased after treatment which shows that there is release of urinary obstruction.

CONCLUSION: The classical treatment *Matra Basti* with *Dhanyaka Gokshura Ghrita* is definitely effective in management of *Mootraghata* without adverse effect. As this is a single case study, there is need to conduct the study in more number of cases for a definitive conclusion.

97. Patel JK, Dudhamal TS, Gupta SK, Mahanta VD. Dhanyaka Gokshura ghrita matra basti in the management of Benign Prostatic Hyperplasia - A case study. Ayurpharm Int J Ayur Alli Sci. 2013;2(7):233-236; [ISSN: 2278-4772] www.ayurpharm.com
https://www.researchgate.net/publication/272498276_DHANYAKA_GOKSHURA_GHRITA_MATRA_BASTI_IN_THE_MANAGEMENT_OF_BENIGN_PROSTATIC_HYPERPLASIA_-_A_CASE_STUDY



Management of Mootraghata (benign prostatic hyperplasia) with herbal remedies - a pilot study[98]

Aim: To study the efficacy of *Kanchanara Guggulu* intake and *Dhanyaka Gokshura Ghrita Matra Basti* in the management of *Mootraghata/*benign prostatic hyperplasia/BPH.

MATERIALS AND METHODS:

STUDY DESIGN: An open labelled single armed clinical trial of 10 patients of *Mootraghata*/BPH.

INCLUSION CRITERIA: Male patients of age above 50 years having signs and symptoms of *Mootraghata* were included in this study.

EXCLUSION CRITERIA: Patients below 50 years of age, patients suffering from malignancy, systemic diseases like uncontrolled hypertension (HT), diabetes Mellitus (DM), tuberculosis (TB), paralysis, and Parkinsonism etc. were excluded from study.

INTERVENTIONS:

Orally: *Kanchanar Guggulu* was administered in dose of 500 mg, three times (TID) with luke warm water, half an hour before breakfast.

Matra Basti: *Dhanyaka Gokshura Ghrita* was administered in 60 ml once daily as *Matra Basti*, just before breakfast.

RESULT: Table 1: Effect of therapy on Objective parameters: (N=10)

Objective Parameters	Mean Score	
	BT	AT
Prostate size & Volume	34.55	31.22
Post-voidal Residual Urine Volume	49.89	13.89
Average Urine Flow Rate	1.79	3.65

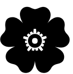
Table 2: Effect of therapy on IPSS

International Prostate Symptoms Score	Mean Score	
	BT	AT
Incomplete emptying	4.3	0.8
Frequency	5.0	1.3
Intermittency	4.2	0.7
Urgency	4.5	1.5
Weak stream	4.3	1.5
Straining	3.7	1.0
Nocturia	4.0	0.6

CONCLUSION: *Kanchanar Guggulu* orally & *Dhanyaka Gokshura Ghrita Matra Basti* is safe and effective in symptomatic management of *Mootraghata*. It was also concluded that further growth of the prostate gland can be controlled with this therapy.

98. Joyal, P., S, D. T., K, G. S., & D, M. V. (2014). Management of Mootraghata (Benign Prostatic Hyperplesia) with herbal remedies- A pilot study. *International Journal of Ayurvedic Medicine*, *5*(1). https://ijam.co.in/index.php/ijam/article/view/05122014

https://www.researchgate.net/publication/272498677_Management_of_Mootraghata_Benign_Prostatic_Hyperplesia_with_herbal_remedies-A_pilot_study



Management of Benign Prostatic Hyperplasia with Bala Tail Matra Basti-a case study[99]

CASE DESCRIPTION: A 65 year old male patient of *Vata-Kaphaja Prakriti* had complaints of incomplete emptying, frequency of micturition, urgency and weak stream since last 6 months. Gradually his routine life was disturbed and there was feeling of more discomfort.

ON EXAMINATION: Preliminary clinical examinations and per rectal examination were done to assess the enlargement of prostate.

INVESTIGATION: Routine biochemical and haematological investigations were done and the values were found to be within normal limit. The size of the prostate gland was 54cc, post-voidal residual urine was 20cc, IPSS was 10 and average urine flow Rate was 13ml/sec.

THERAPEUTIC INTERVENTION:

POORVA KARMA (Preoperative measures)

Patient was advised to pass the natural urges in morning before coming for *Matra Basti* at 9am. *Basti* materials (*Bala Tail*, rubber catheter, syringe etc.) were prepared beforehand. The patient was asked to lie-down in left lateral position on table.

PRADHANA KARMA (Operative measures)

Luke warm *Bala Tail* approximately 60 ml was administered slowly into the rectum with help of plastic syringe and rubber catheter daily for 21 days.

PASHCHATA KARMA (Post-Operative measures)
After *Basti* patient was advised to lie down in left lateral position for 10 minutes. Afterwards patient was shifted to ward for local *Svedana Karma* (fomentation) at lower abdomen with help of warm water bag. Patient was advised to retain the *Basti* material as much time as possible. Light diet was allowed after one hour.

RESULTS: Before treatment IPSS score was 10, and after completion of the treatment IPSS score was reduced to one i.e. the patient was asymptomatic with good quality of life. The size of prostate before treatment was 54cc in USG findings and after treatment it was 40cc. In USG findings Post Voidal Residual Urine Volume (PVRU) was 20cc before treatment which was reduced to nil. The Average Urine Flow Rate was measured manually and it was observed 13ml/sec before treatment. In selected patient AUFR was 13ml/sec and after completion of treatment it was 16ml/sec, which is considered as normal.

CONCLUSION: *Bala Tail Matra Basti* is a simple and effective treatment modality for Benign Prostatic Hyperplasia without any adverse effect.

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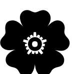
99. Banothe GD, Mahanta VD, Gupta SK, Dudhamal TS. Management of Benign Prostatic Hyperplasia with Bala Taila Matra Basti-A Case Study. International Ayurvedic Medical Journal (IAMJ) 2015; 3(3): 1262-1265. [ISSN: 2320 5091]. www.iamj.in
https://www.researchgate.net/publication/277327780_Management_of_Benign_Prostatic_Hyperplasia_with_Bala_Taila_Matra_Basti-A_Case_Study_International_Ayurvedic_Medical_Journal_IAMJ_2015_33_1262-1265



Case report: management of Mootraghata (Benign Prostatic Hyperplasia) with Bala Taila Matra Basti[100]

CASE DESCRIPTION: A 48 year old male patient had complaints of increased frequency of micturition, nocturia, weak stream, incomplete voiding, dysuria and lower abdominal pain. Patient was suffering from above complaints for 2 years. He was suffering from continuous lower abdominal pain, and had consulted an urologist and taken medicine without any apparent relief.

ON EXAMINATION: Per rectal digital findings showed enlargement of both lateral lobe, round shaped, smooth surface, upper border approachable, median groove palpable, fixed mobility, tenderness absent, free rectal mucosa, soft consistency, & mild enlarged prostate gland.

INVESTIGATION: The blood investigations like serum creatinine, prostate specific antigen (PSA) test, ultrasonography (USG) of prostate and uroflowmetry were carried out before and after the treatment to assess the effect of therapy.

THERAPEUTIC INTERVENTION: Patient was asked to lie in left lateral position on table. 60ml of luke warm *Bala Taila* (brought to room temperature) was slowly and steadily administered through rectal route with plastic syringe and rubber catheter. At the time of insertion of the *Taila,* the patient was asked to inhale & exhale deeply, and to keep himself as relaxed as possible.

RESULTS:

Table 1: Investigation Findings:

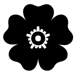
Investigation	Before Treatment	After Treatment
Prostate Volume (Size)	21 cc	15 cc
PSA	2.06 ng/ml	0.6 ng/ml
Serum Creatinine	1.21 mg/dl	0.69 mg/dl

Table 2: Reports of Uroflowmetry:

Evaluation	Before Treatment	After Treatment
Voided Volume	198 ml	346 ml
Maximum flow rate	18 ml/sec	28 ml/sec
Average flow rate	11 ml/sec	13 ml/sec
Post Voidal Residual (PVR)	30 cc	Nil
Voiding time	18 sec	25 sec
Flow time	18 sec	23 sec
Time to maximum flow	9 sec	6 sec

CONCLUSION: *Bala Taila Matra Basti* is safe and effective in symptomatic management of *Mootraghata* (BPH). As this was a single case study, it should be tried in larger samples for validation.

100. Patel JK, Dudhamal TS, Gupta SK, Mahanta VD. Case report: Management of *Mootraghata* (benign prostatic hyperplasia) with *Bala Taila Matra Basti*. International Journal of Herbal Medicine (IJHM). 2014; 3(1): 37-39. [ISSN: e-2321-2187, p-2394-0514]. www.florajournal.com
https://www.researchgate.net/publication/297547258_Case_report_Management_of_mootraghata_benign_prostatic_hyperplasia_with_Bala_Taila_Matra_Basti



Efficacy of Kanchanara Guggulu and Matra Basti of Dhanyaka Gokshura Ghrita in Mootraghata (Benign Prostatic Hyperplasia)[101]

PURPOSE: To evaluate the efficacy of Kanchanara Guggulu & Matra Basti of Gokshura Ghrita in Mootraghata.

MATERIALS AND METHODS:

STUDY DESIGN: An open labelled randomized control trial on 30 patients having signs and symptoms of *Mootraghata* (BPH).

INCLUSION CRITERIA: Male patients of age above 50 years having signs and symptoms of *Mootraghata* such as *Bahumutrata, Manda Mootradhara, Mootravarodha, Mootradaha, Vrita Granthi, Ashtilavat Granthi, Alpa Granthi* etc., were included in the study.

EXCLUSION CRITERIA: Patients below age of 50 years, suffering with malignancy, congenital abnormalities of urogenital tract or any other pelvic pathologies, uncontrolled hypertension, diabetes mellitus, tuberculosis, hemiplegia, parkinsonism, etc. were excluded from the study.

DRUG AND POSOLOGY: for 21 days in all groups.
Group A: 500 mg of *Kanchanara Guggulu* tds, with lukewarm water, half an hour before food.
Group B: 60 ml *Dhanyaka Gokshura Ghrita* once a day as *Matra Basti*, just before breakfast.
Group C: 500 mg of *Kanchanara Guggulu* tds, with lukewarm water, half an hour before food and 60 ml *Dhanyaka Gokshura Ghrita* once a day as *Matra Basti*, just before breakfast.

RESULTS
Table.1. EFFECT OF THERAPY ON OBJECTIVE PARAMETERS (Mean):

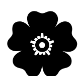
Criteria	Group A		Group B		Group C	
	BT	**AT**	**BT**	**AT**	**BT**	**AT**
Prostate size and volume	33.93	30.38	26.22	25.22	34.55	31.22
PVRU Volume	36.81	20.22	19.11	10.0	49.89	13.89
AUFR	0.81	1.94	0.99	2.73	1.79	3.65

Table.2. EFFECT OF THERAPY ON SUBJECTIVE PARAMETERS (Mean):

Criteria	Group A		Group B		Group C	
	BT	**AT**	**BT**	**AT**	**BT**	**AT**
Incomplete emptying	4.4	1.1	5.0	0.3	4.3	0.8
Frequency	4.5	1.8	4.0	1.5	5.0	1.3
Intermittency	4.4	1.0	4.1	0.7	4.2	0.7
Urgency	4.0	1.0	3.6	0.1	4.5	1.5
Weak stream	5.0	0.8	4.6	1.4	4.3	1.5
Straining	4.6	0.8	5.0	0.6	3.7	1.0
Nocturia	4.2	2.2	4.1	1.0	4.0	0.6
Quality of life	5.3	2.2	5.2	1.0	5.1	1.4

CONCLUSION: The combined therapy showed more effective conservative treatment than the single therapies. This conservative treatment is may be used as a safe and effective alternative management in cases of *Mootraghata* (BPH) in senile age and improve the quality of life of patients.

101. Patel JK, Dudhamal TS, Gupta SK, Mahanta V. Efficacy of Kanchanara Guggulu and Matra Basti of Dhanyaka Gokshura Ghrita in Mootraghata (benign prostatic hyperplasia). AYU 2015;36 (2):138-44. [ISSN:0974-8520] www.ayujournal.com
https://www.researchgate.net/publication/293025276_Efficacy_of_Kanchanara_Guggulu_and_Matra_Basti_of_Dhanyaka_Gokshura_Ghrita_in_Mootraghata_benign_prostatic_hyperplasia



Varunaa Shigru Guggulu and Bala Taila Matra Basti in the management of Mootraghata (benign prostatic hyperplasia)-a pilot study[102]

PURPOSE: To evaluate the efficacy of *Varuna Shigru Gugglu* & *Bala Taila Matra Basti* in the management of Mootraghata (BPH).

MATERIAL AND METHODS:

STUDY DESIGN: An open labelled single armed prospective clinical trial on ten male patients of BPH.

INCLUSION CRITERIA: Male patients of age above 40 years having signs and symptoms of *Mootraghata/*BPH were included in the study.

EXCLUSION CRITERIA: Patients below 40 years suffering from CA prostate, systemic diseases like uncontrolled hypertension, diabetes mellitus, TB, paralysis, & Parkinsonism etc. were excluded.

INTERVENTIONS: *Varunaa Shigru Guggulu* was given orally in a dose of 500 mg tds with luke warm water, 30min before food. 60ml of *Bala Taila* & sesame oil *Matra Basti* was given once daily, just before breakfast.

***PRADHANA KARMA*:** Patient was asked to lie in left lateral position on table. Preheated *Bala Taila* was cooled to room temperature; and 60ml of *Bala Taila* was administered slowly and steadily through rectal route with plastic syringe and rubber catheter lubricated with *Taila*. At the time of insertion of the *Taila* patient was asked to inhale and exhale deeply and keep himself as relaxed as possible.

RESULTS: **Table.1. EFFECT OF THERAPY ON SUBJECTIVE PARAMETERS (Mean):**

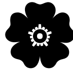
Criteria	BT	AT
Incomplete emptying	4.4	1.1
Frequency	4.5	1.8
Intermittency	4.4	1.0
Urgency	4.0	1.0
Weak stream	5.0	0.8
Straining	4.6	0.8
Nocturia	4.2	2.2
Quality of life	5.3	2.2

Table.2. EFFECT OF THERAPY ON OBJECTIVE PARAMETERS (Mean):

Criteria	BT	AT
Prostate size and volume	33.93	30.38
PVRU Volume	36.81	20.22
AUFR	0.81	1.94

CONCLUSION: *Varuna Shigru Guggulu* with *Bala Taila Matra Basti* was found to be effective in BPH patients. Use of this therapy in early stage of BPH can prevent the further progressive pathology of the disease. No adverse effects were seen throughout the study.

102. Joyal Patel, Dudhamal TS. Varunaa shigru guggulu and bala taila matra basti in the management of mootraghata (benign prostatic hyperplasia) - a pilot study. Ayurpharm Int J Ayur Alli Sci. 2017; 6(2):15-23 [ISSN: 2278-4772] www.ayurpharm.com.
https://www.researchgate.net/publication/318969548_VARUNAA_SHIGRU_GUGGULU_AND_BALA_TAILA_MATRA_BASTI_IN_THE_MANAGEMENT_OF_MOOTRAGHATA_BENIGN_PROSTATIC_HYPERPLASIA-A_PILOT_STUDY



Ayurvedic approach of geriatric disease BPH (benign prostatic hyperplasia)-a single case report[103]

CASE DESCRIPTION: A 67 Year old male patient had complaints of increased frequency of urination (6-7 times/day), nocturia (6-7 times) and urgency since last 3 years and also weak steam occasionally. He had history of HTN for last 16 years and is used to take tab. Amlodipine (5 mg) 1 OD.

ON EXAMINATION: On digital examination (P/R) after soap water enema: mild enlargement of both lateral lobe was noted, oval in shape, smooth surface, upper border was reached, median groove palpable, fixed mobility, free rectal mucosa, soft in consistency, and tenderness was absent.

INVESTIGATION All Routine blood & urine investigations were done & were found to be within normal limit; serum creatinine was 1.3mg/dl, blood urea-29mg/dl, PSA Test-2.531 mg/ml. In USG-prostate size was found to be 70cc and 42×58×55 mm in dimension and urine flow rate (manually) was 5.6ml/sec.

THERAPEUTIC INTERVENTION: Patient was kept in left lateral position for *Matra Basti*. The *Ushiradya Taila* was warmed up to room temperature. A lubricated (with 2% LOX Jelly) rubber catheter was inserted in to the rectum and approximately 60 ml of *Ushiradya Taila* was slowly administered with help of a plastic syringe. During administration of *Basti*, patient was advised to inhale and exhale deeply and keep himself relaxed. *Basti* was given continuous for 21 days once daily before breakfast. *Kanchanar Guggulu* was given orally, 1000 mg TDS for 21 days.

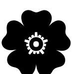
RESULT & CONCLUSION: The cardinal symptoms of prostatic enlargement like increased frequency, nocturia, weak stream, intermittency, straining and incomplete voiding were relieved symptomatically in this patient. Significant changes were observed in size of prostate and reduction of post voidal residual urine volume. So this treatment can be used as a treatment modality for BPH patients to prevent the complications of surgery and allopathic medicines.

REPORT
Liver - GB - (N)
Spleen & Pancreas - (N)
Both kidney - No e/o stone or HN
UB - Full (N)
Prostate - 42x58x55 mm
Vol - 70 cc
PVR - Nill
⇒ Mild BPH
Thanks for referring
Hon. Radiologist

REPORT
Liver - GB - (N)
Spleen & Pancreas - (N)
Both kidney - No e/o stone or HN
UB - Full (N)
Prostate - 36x48x44 mm size
Volu - 40 cc
PVR - Nill
Mild BPH

Before Treatment	After Treatment

103. Sankaliya B, Dudhamal TS. Ayurvedic approach of geriatric disease BPH (Benign Prostatic Hyperplasia) - A single case report. World Journal of Pharmacy and Pharmaceutical Sciences. 2019;8(1): 1094-1099. [ISSN 2278- 4357] www.wjpps.com SJIF Impact Factor 7.421.
https://www.researchgate.net/publication/360621216_AYURVEDIC_APPROACH_OF_GERIATRIC_DISEASE_BPH_BENIGN_PROSTATIC_HYPERPLASIA_-A_SINGLE_CASE_REPORT



A clinical evaluation of Kanchanara Guggulu and Bala Taila Matra Basti in the management of Mutraghata with special reference to benign prostatic hyperplasia[104]

PURPOSE: To study the efficacy of *Bala Taila Matra Basti* with/without *Kanchanara Guggulu* in management of BPH.

MATERIALS AND METHODS:

STUDY DESIGN: An open labelled randomized clinical trial on patients having signs & symptoms of *Mutraghata*/BPH.

INCLUSION CRITERIA: Patients having classical signs and symptoms of *Mutraghata* (BPH) & aged b/w 40-70yrs.

EXCLUSION CRITERIA: Patients with age below 40 years & above 70 years; patients of malignancy, congenital deformities of the urogenital tract or any abdomino-pelvic pathology other than BPH; systemic diseases such as uncontrolled systemic arterial hypertension and diabetes mellitus, tuberculosis, paralysis, Parkinsonism & known cases of heart disease were excluded from the study

DIAGNOSTIC CRITERIA: Patients having signs of enlarged prostate and decreased urinary flow rate; and symptoms like retention, incomplete voiding, dribbling, hesitancy and incontinence of urine were studied. International Prostate Symptom Score was used to evaluate subjective complaints of patients before and after the administration of the therapy. Average urine flow rate measurement, ultrasonography findings of the prostate gland, post voidal residual urine volume and per rectal digital examination for the prostate was also done.

INVESTIGATIONS: Hb%, complete blood count, erythrocyte sedimentation rate, fasting blood sugar, postprandial blood sugar, serum creatinine, serum alkaline phosphatase and blood urea, routine and microscopic examination of urine and stool, USG abdomen and prostate and X-ray KUB was done.

CLINICAL STUDY DESIGN

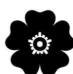
Group A (n=12): *Bala Taila Matra Basti* 60ml once a day, administered before breakfast for 21 days.

Group B (n=18): *Bala Taila Matra Basti* 60 ml once a day, administered before breakfast for 21 days along with *Kanchanara Guggulu* orally 1g (2 tab of 500mg each) three times a day after food with lukewarm water for 21 days.

RESULT: In group A, maximum improvement was seen in 3 patients (25.00%), moderate improvement was seen in 8 patients (66.67%), and mild improvement was observed in 1 patient (8.34%). Similarly, in group B, maximum improvement was found in 10 patients (55.56%), moderate improvement in 7 patients (38.89%) and mild improvement in 1 patient (5.56%) only. None of the patients had complete remission or remained unchanged in either of the groups.

CONCLUSION: 60 ml *Bala Taila Matra Basti* is effective and tolerable in the patients of *Mutraghata* (Benign Prostatic Hyperplasia). As the benign prostatic hyperplasia is progressive degenerative disorder, long term treatment may be needed to provide maximum relief in such patients.

104. Banothe GD, Mahanta V, Gupta SK, Dudhamal TS. A clinical evaluation of Kanchanara Guggulu and Bala Taila Matra Basti in the management of Mutraghata with special reference to benign prostatic hyperplasia. AYU 2018;39:65-71. [ISSN: p-0974-8520 e-0976-9382] www.ayujournal.com
https://www.researchgate.net/publication/330589081_A_clinical_evaluation_of_Kanchanara_Guggulu_and_Bala_Taila_Matra_Basti_in_the_management_of_Mutraghata_with_special_reference_to_benign_prostatic_hyperplasia



A standard controlled clinical study of Varuna Shigru Guggulu and Bala Taila Matra Basti in the management of Mootraghata (benign prostatic hyperplasia)[105]

PURPOSE: To compare the efficacy of *Varuna Shigru Guggulu* with *Balataila Matra Basti* & the standard drug tamsulosin hydrochloride in BPH.

MATERIALS AND METHODS:

STUDY DESIGN: A randomized control clinical study was done on randomly selected 100 patients having signs and symptoms of *Mootraghata*/ BPH.

INCLUSION CRITERIA: Patients of age above 40 years having signs and symptoms of *Mootraghata* (BPH) were included in this study.

EXCLUSION CRITERIA: Patients below 40 years of age, patients suffering from malignancy, systemic diseases like uncontrolled hypertension and diabetes mellitus, tuberculosis, paralysis, parkinsonism, etc. were excluded from the study.

GROUPING AND POSOLOGY

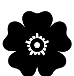
Group A (Trial group): Both the trial drugs, *Varuna Shigru Guggulu* and *Bala Taila* (Anubhuta Yoga) are in accordance with schedule Y of D and C Act. **Orally**: *Varuna Shigru Guggulu* was administered in a dose of 500 mg thrice a day for 30 days with lukewarm water, 30 min before breakfast. *Matra Basti: Bala Taila* was administered in dose of 60 ml through rectal route once daily as *Matra basti*, for 30 days just before breakfast.
Group B (Controlled group): **Orally**: Capsule tamsulosin hydrochloride, 0.2 mg twice a day, for 30 days after meal.

RESULT: (N=50 in each group)

Effect of therapy on Assessment Criteria in group A				Effect of therapy oin group B		
	Mean			Mean		
Parameters	**BT**	**AT**	**Relief (%)**	**BT**	**AT**	**Relief (%)**
Incomplete emptying	3.8	0.7	80.83	2.5	0.9	61.72
Frequency	4.1	0.8	79.61	3.4	1.4	58.58
Intermittency	4.3	0.9	79.17	3.8	1.3	66.49
Urgency	2.5	0.4	80.95	1.3	0.3	77.61
Weak stream	4.9	1.2	73.88	4.3	1.2	71.89
Straining	4.5	0.8	80.70	3.9	1.0	74.36
Nocturia	3.6	1.2	64.44	2.8	1.3	55.63
Quality of life	4.9	1.5	69.35	4.3	1.9	54.46
Prostate size and volume	50.08	48.62	2.91	37.28	34.66	7.028
Post voidal residual urine volume	26.10	21.12	19.08	19.08	22.04	-15.51
Average urine flow rate	2.87	4.52	57.52	4.80	5.92	53.93

CONCLUSION: *VSG* and *Bala taila Matra Basti* (BT-MB) is safe and effective in the symptomatic management of *Mootraghata* (BPH), and is a better option than tamsulosin hydrochloride.

105. Patel JK, Dudhamal TS. A Standard Controlled Clinical Study of Varuna Shigru Guggulu and Bala Taila Matra Basti in the Management of Mootraghata (Benign Prostatic Hyperplasia). Journal of Research in Ayurvedic Sciences. 2018;2(3):164-171. [ISSN: -2456-5601] www.jrasccras.com
https://www.researchgate.net/publication/331298790_A_Standard_Controlled_Clinical_Study_of_Varuna_Shigru_Guggulu_and_Bala_Taila_Matra_Basti_in_the_Management_of_Mootraghata_Benign_Prostatic_Hyperplasia



Uttarbasti: a traditional approach in the management of Mootraghata (Benign prostate hyperplasia)-a single case study[106]

CASE DESCRIPTION: A 45 year old male patient had complaint of increased frequency of urine, urgency and hesitancy since one year. Dribbling of urine and straining since three months. Patient had no relevant past medical or surgical history. Patient was taking tamsulosin hydrochloride 0.4 mg once per day for 3 months as prescribed from a government hospital without any symptomatic relief. .

ON EXAMINATION: Enlargement of lobes: right lateral/left lateral; Shape of prostate: oval; Surface: smooth; Upper border: reached; Median groove: palpable; Mobility: movable; Rectal mucosa: free; Consistency: soft; Tenderness: absent; Size of prostate: moderate.
Assessment was done with proper application of IPSS score according to available previous study. A total of 23 out of 36 score on IPSS scoring was found in this patient. Quality of life score fell in mostly dissatisfied attitude. Total scoring showed severely symptomatic.

Male sexual function score was eight out of twenty. Assessment was done with proper application of male sexual function scoring methods as per availability in previous studies.

International index of erectile function score was nineteen out of twenty five. Assessment was done by using IIEF score as per available in previous study.

INVESTIGATION: Prostate size 43 x 52 x 50; Prostate volume 55 cc; PVRU 60 ml; Voided volume 107 ml; Flow time 24 sec; Max flow rate 09 ml; Delay time 00 sec; Average flow rate 02.6 ml; Interval time 11 sec; Voided time 40 sec; Time to max flow 38 sec.

THERAPEUTIC INTERVENTION: *Uttarbasti* was given by *Bala Taila* 20 cc once in a day for two week, at one week interval, and tab *Kanchanar Guggulu* was given orally 1 gm three times a day with water for one month.

RESULT: 10 out of 36 was a total score of IPSS findings in this patient. Quality of life score fall in mostly satisfied. Total scoring showed moderately symptomatic. Male sexual function score was eight out of 20. International index of erectile function score was 21 out of twenty five. Prostate size 25 x 24 x 32; Prostate volume 32cc; PVRU 25 ml; Voided volume 180 ml; Flow time 42 sec; Max flow rate 14 ml; Delay time 00 sec; Average flow rate 5.03ml; Interval time 4 sec; Voided time 46 sec; Time to max flow 32 sec.

CONCLUSION: The result obtained in this single case study advocate that *Balataila Uttarbasti* with *Kanchanar Guggulu* have better result in the cases of *Mootraghata*.

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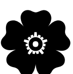
106. Kumar N, Dudhamal TS. Uttarbasti-A traditional approach in the management of *Mootraghat* (Benign Prostate Hyperplasis) – A single case Study. Indian Journal of applied Research 2022;12(8): [ISSN 2249-555x]

https://www.researchgate.net/publication/362392054_Uttarbasti_-_A_traditional_approach_in_the_management_of_Mootraghata_Benign_prostate_hyperplasia_A_single_case_study



A comparative clinical study of *Kanchanar Guggulu* and *Varuna Shigru Guggulu* along with *Bala Taila Matra Basti* in the management of *Mootraghata* w.s.r. to benign prostatic hyperplasia[107]

PURPOSE: To compare the efficacy b/w *Kanchanar Guggulu* & *Varuna Shigru Guggulu* in cases of BPH when administered with *Bala Taila Matra Basti*.

MATERIAL AND METHODS:

STUDY DESIGN: An open labelled randomized clinical trial.

SELECTION OF PATIENTS: A total 81 patients of *Mootraghata* (BPH) were selected irrespective of their religion, occupation. Patients having complaints of increased frequency/urgency, hesitancy, decreased urine flow rate/weak stream, acute/chronic urine retention, scanty micturition, painful micturition, dysuria, and burning micturition were randomly divided into two groups by computerized randomization method.

INCLUSION CRITERIA: Patients having signs and symptoms of *Mootraghata* (BPH) of the age group of 40–70 years with controlled diabetes mellitus, and controlled hypertension were included.

INVESTIGATIONS: CBC (hemogram), ESR, RBS, urine routine, and microscopic examination were done only before treatment for analysis purpose. Prostate specific antigen (PSA), Sr. testosterone, Bl. urea, Sr. creatinine, USG examination of the prostate, KUB, & uroflowmetry were done before and after treatment for assessment of the therapeutic effect.

THERAPEUTIC INTERVENTION

In Group A (n = 40): patients were treated with *Kanchanar Guggulu* orally (1 g thrice a day) for 21 days.
In Group B (n = 41): patients were treated with *Varuna Shigru Guggulu* orally (1 g thrice a day) for 21 days.

In both groups, *Matra basti* was a common treatment modality. All the patients were followed up for 60 days, after completion of the treatment at an interval of every 15 days.

RESULTS: The overall effect of treatment in two groups reveals that out of the total 81 patients registered and completed treatment and follow-up, two patients (2.47%) showed complete cure and 10 patients (12.35%) have shown markedly improvement, & 47 patients (58.02%) have shown mild improvement after completion of the course. There were 22 patients (27.16%) in unchanged category. The average effect in overall improvement was noted 36.33% in Group A, while 37.85% effect was noted in Group B.

CONCLUSION: The cardinal symptoms of BPH such as increased frequency, nocturia, weak stream, and incomplete voiding were relieved completely in almost all patients of both groups. In comparison between both groups, overall effect on signs was better in Group B than Group A. No any adverse effects were reported by any of the patients during the course of treatment. Finally, the study can be concluded that *Kanchanar Guggulu* and *Varuna Shigru Guggulu* orally along with *Bala Taila Matra Basti* are safe and effective in the management of *Mootraghata* (BPH).

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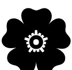
107. Priyanka Chauhan, T. S. Dudhamal, Snehal Sonani, Priyal Ghoniya. A Comparative Clinical Study of Kanchanar Guggulu and Varuna Shigru Guggulu along with Bala Taila Matra Basti in the Management of *Mootraghata* w.s.r. to Benign Prostatic Hyperplasia. e-ISSN: 2349-0659 p-ISSN; 2350-0964. www.apjhs.com https://www.researchgate.net/publication/367606819_A_Comparative_Clinical_Study_of_Kanchanar_Guggulu_and_Varuna_Shigru_Guggulu_along_with_Bala_Taila_Matra_Basti_in_the_Management_of_Mootraghata_wsr_to_Benign_Prostatic_Hyperplasia



Clinical efficacy of Agnikarma in the management of Sandhigata Vata w.s.r. to Cervical spondylosis[108]

PURPOSE: To compare the efficacy of *Agnikarma* and *Trayodashanga Guggulu* in *Sandhigata Vata* management.

MATERIALS AND METHODS:

STUDY DESIGN: An open labelled randomized clinical trial was done on 21 patients irrespective of their sex, caste, occupation and religion.

DIAGNOSTIC CRITERIA: All patients were diagnosed on the basis of sign and symptoms of cervical spondylosis.

INCLUSION CRITERIA: Patients with presenting symptoms of *Shoola* (pain), *Stambha* (stiffness) in cervical region, and *Graha* (restricted movement) of neck, with associated Symptoms like *Bhrama* (giddiness), *Sira Shoola* (headache), *Chimchimayana Hasta* (tingling sensation in hand), *Suptata* (loss of sensation) were included in the study.

EXCLUSION CRITERIA: Patients with uncontrolled diabetes mellitus, tuberculosis of spine, carcinoma of cervical vertebra, or with a history of injury to cervical spine were excluded.

INVESTIGATION: Routine investigations of blood, urine and stool were carried out to rule out other pathology before starting the treatment. X- Ray of cervical spine: AP and lateral views were also done prior to the study.

GROUPING:

Group A (n=11): *Agnikarma* was done on the patients with *Panchadhatu Shalaka.*

Group B (n=10): *Trayodashanga Guggulu* 3gm twice a day with lukewarm water for one month was given.

RESULTS: Out of 11 patients of *Agnikarma* group, 18.00% showed completely relief without recurrence of the symptoms up to one month; whereas another 18.00% of patients showed marked improvement and 63.00% patients showed improvement in the symptoms. Out of 10 patients in *Trayodasanga Guggulu* group, 10.00% patients were completely cured, whereas the other 30.00% and 60.00 % of patients showed marked improvement and improvement respectively.

CONCLUSION: *Agnikarma* therapy is a simple, safe and result oriented treatment modality for *Sandhigat Vata*/cervical spondylosis. A minimum of four sittings of the treatment with an interval of seven days is required to get optimum result (more sittings as per requirement of the patient on the basis of chronicity and severity of the disease can also be considered). *Trayodasanga Guggula* is also a potent formulation to treat the ailment.

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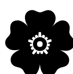
108. Vyasadeva Mahanta, T. S. Dudhmal, S. K. Gupta; Clinical Efficacy of Agnikarma in the Management of Sandhigata Vata w.s.r. to Cervical Spondylosis; Indian Journal of Ancient Medicine and Yoga Volume 5 Number 1, January - March 2012 (p-ISSN 0974- 6986, e-ISSN 0974 – 6994)
https://www.researchgate.net/publication/255989641_Clinical_Efficacy_of_Agnikarma_in_the_Management_of_Sandhigata_Vata_wsr_to_Cervical_Spondylosis



Clinical efficacy of Agnikarma in Sandhigata Vata w.s.r. to Osteoarthritis of Knee Joint-A pilot study[109]

PURPOSE: To assess the efficacy of *Agnikarma* in *Sandhigata Vata* or O.A cases of knee joint. **MATERIAL AND METHODS:**

STUDY DESIGN: An open labelled pilot study with 14 patients of *Janugata Sandhivat.*

INCLUSION CRITERIA: The patients aged b/w 45-70 years suffering from *Janugata Sandhivata* of either sex were included in this study.

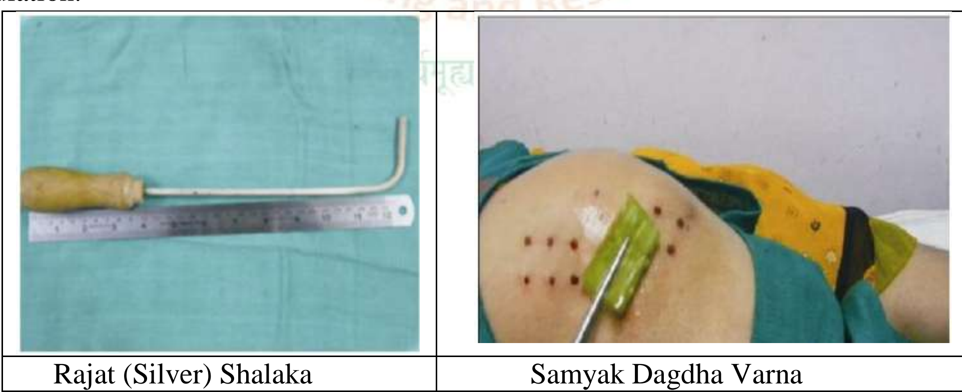
EXCLUSION CRITERIA: The patients suffering from systemic diseases like diabetes mellitus, rheumatoid arthritis, paralysis, Parkinson's disease, severe anaemia and cancer were excluded. Secondary joint pain due to T.B., Syphilis, AIDS, and leprosy were also excluded from study. The pregnant patients were also excluded because it is contraindicated for *Agnikarma*.

INVESTIGATIONS: TLC, DLC, Hb%, Blood sugar (FBS, PPBS), Uric acid, RA factor, routine urine analysis and X-ray knee joints were carried out at base line and after treatment.

TREATMENT INTERVENTION: *Rajat Shalaka* specially designed for the procedure, having *Ashtapad* , of weight 51 gm, circumference 1.8 cm and length 12 cm. *Triphala Kwatha* was used for cleaning before procedure. Pulp of aloe vera used to apply just after *Agnikarma*. After the procedure *Madhu, Sarpi* was applied up to 2 days.

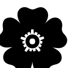
RESULTS: After 4 weeks of treatment, 5 patients (35.71 %) showed moderate improvement. Marked improvement was seen in 01(07.14%) patients and mild improvement was observed in 2 patients (14.29%), while 1 patient condition remained unchanged (07.14 %). Highly significant relief in pain was observed after 1st sitting of *Agnikarma*. After 1st sitting of *Agnikarma* there was no need of analgesics for the patient. After completion of treatment, changes in x-ray findings were found to be insignificant. During treatment and follow-up period no any adverse effect was found.

CONCLUSION: *Agnikarma* is a non-pharmacological, O.P.D. procedure, requiring minimum equipment, so it can be used for pain management in osteoarthritis. In x-ray knee joint there was no changes found, in osteophytes and space reduction before and after *Agnikarma*, due to being structural defects. As this is a pilot study conducted in less number of cases so definitive conclusion are to be drawn after conducting the study in large population.



Rajat (Silver) Shalaka	Samyak Dagdha Varna

109. Dudhamal TS, Gupta SK, Jethava N. Clinical efficacy of Agnikarma in Sandhigata Vata w.s. r. to Osteoarthritis of Knee Joint A pilot study. Ayurlog: National Journal of Research in Ayurved Science-2013; 1(3): 54-62; [ISSN 2320-7329] http://www.ayurlog.com
https://www.researchgate.net/publication/277638673_Dudhamal_TS_Gupta_SK_Jethava_N_Clinical_efficacy_of_Agnikarma_in_Sandhigata_Vata_wsr_to_Osteoarthritis_of_Knee_Joint-A_pilot_study_Ayurlog_National_Journal_of_Research_in_Ayurveda_Science_2013_13_54-6



Role of Agnikarma in Sandhigata Vata (Osteoarthritis of knee joint)[110]

PURPOSE: To compare the efficacy of *Rajata* and *Loha Shalaka* for *Agnikarma* in osteoarthritis of knee joint (*Sandhigata Vata*).

MATERIALS AND METHODS:

STUDY DESIGN: An open labelled randomized clinical trial (n=30).

DIAGNOSTIC CRITERIA: Patients suffering from sign & symptoms of *Sandhigata Vata* such as pain, tenderness, stiffness & crepitus in knee joint were selected irrespective of sex, caste & religion.

INCLUSION CRITERIA: Patients of either sex aged in b/w 25-70yrs suffering from *Janugata Sandhivata* (OA of knee joint).

EXCLUSION CRITERIA: Patients below 45 years & above 70 years of age, with diabetes mellitus, rheumatoid arthritis, paralysis, Parkinson's disease, severe anaemia, cancer patients, secondary OA due to tuberculosis, syphilis, AIDS, leprosy, etc were excluded. *Sandhigata Vata* other than *Janugata Sandhivata,* & pregnant patients as they are contraindicated for Agnikarma were also excluded.

INVESTIGATIONS: Routine haematological and biochemical investigations such as blood sugar (fasting and postprandial), uric acid, RA factor, lipid profile, and routine urine analysis.

GROUPING:
Group-A: Patients (n=15) were treated by *Agnikarma* with *Rajata Shalaka*.
Group-B: Patients (n=15) were treated by *Agnikarma* with *Loha Shalaka*.
Agnikarma was done in four sittings with a weekly interval.

RESULT:
Group-A (*Rajata Shalaka*) provided 76.31% relief in pain while in Group-B (*Loha Shalaka*) 83.77% cases got relief, and in both the cases highly significant (P < 0.001) result was found.

Agnikarma by *Rajata Shalaka* provided 57.13% relief from crepitus in Group-A, and *Agnikarma* by *Loha Shalaka* provided 57.92% relief from crepitus in Group-B.

In Group-A, 4.21% and in Group-B, 4.67% cases got relief in the level of swelling measured at midpoint of patella. *Agnikarma* with *Rajata Shalaka* in Group-A provided 4.31% relief while *Loha Shalaka* in Group-B provided 4.71% relief in the girth measured at 2 inches above the patella. Group-A got 4.17% relief, while Group-B got 4.22% relief in swelling as measured 2 inches below the patella.

On goniometric observation, angle of extension was found increased by 10.40% in Group-A & 6.19% in Group-B. Angle of flexion was found reduced by 33.70% in Group-A & 39.16% in Group-B. In X-ray of the knee joint, there was no change detected.

CONCLUSION: *Agnikarma* had a definite role in pain relief in patients of *Sandhigata Vata*. As *Twakgata Agnikarma* was done, result obtained b/w cases treated by *Rajata* and *Loha Shalaka* were not statistically different. However in pain relief, *Loha Shalaka* provided better results than *Rajata Shalaka*. *Agnikarma* is a non-pharmacological OPD procedure requiring minimum equipment, hence is convenient to be used for pain management in *Sandhigata Vata*.

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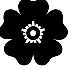
110. Jethava NG, Dudhamal TS, Gupta SK. A role of *Agnikarma* in *Sandhigata Vata* (osteoarthritis of knee joint). AYU 2015;36(1):23-28. [ISSN: 0974-8520] www.ayujournal.com
https://www.researchgate.net/publication/283540191_Role_of_Agnikarma_in_Sandhigata_Vata_osteoarthritis_of_knee_joint



Role of Kativasti in the management of Sandhigata Vata (Lumbar spondylosis): a pilot study[111]

PURPOSE: To study the effect of *Kati Basti* in lumbar spondylosis.

MATERIAL AND METHODS:

STUDY DESIGN: An open labelled single armed prospective trial on 25 diagnosed patients of *Sandhigata Vata* (lumbar spondylosis) irrespective of age, sex, occupation.

INCLUSION CRITERIA: Patients aged b/w 30-70yrs having sign & symptoms like *Kati Sula, Kati Stambha, Kati Graha, Sparsha Asahyata,* and degenerative changes in X-rays of lumbar spine were included in this study.

EXCLUSION CRITERIA: **P**atients suffering from disorders: spinal abnormality, spondylolisthesis, ankylosing spondylosis, RA, recent spinal surgery & skin infection at lumbar area were excluded.

PRADHANA KARMA: Patients were advised to lie down on a simple table in prone position in a comfortable manner to expose the lumbo-sacral area properly. After that a circular boundary of 2×4 inches was prepared with help of paste of black gram powder over the lumbo-sacral area. The inner side of the prepared boundary was properly sealed to avoid leaking of oil. Thereafter the prepared boundary was filled with luke warm *Narayan Taila* and was kept for 30 minutes. During the procedure it was ensured that the temperature of oil was maintained by changing the warm oil. This procedure was carried once daily for 15 days.

PASCHAT KARMA: The major amount of oil was removed with help of a spoon and rest amount was removed with help of cotton swab. The boundary was detached from the body and that area was cleaned with gauze piece. Patients were advised to take rest in a relax position.

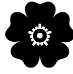
RESULTS: **Table 1: Effect of therapy on cardinal symptoms: (n= 24)**

Cardinal symptoms	BT	AT	% of Relief
Kati Sula	4.17	2.17	48.00
Kati Stambha	2.58	1.04	59.68
Kati Graha	2.58	1.04	59.68
Sparsha Asahyata	2.58	1.25	51.61

CONCLUSION: *Kativasti* with *Narayana Taila* is an effective therapeutic modality for the symptomatic management of lumbar spondylosis and need to be studied in more number of patients.

Black gram powder	**Black gram Semisolid form**	**Kati Basti**

111. Joshi F, Mahanta VD, Dudhamal TS, Gupta SK, Panda PK. Role of Kativasti in the Management of Sandhigata Vata (Lumbar Spondylosis): A Pilot Study. *Ayurpharm Int JAyur Alli Sci* 2016;5(1): 8-14. [ISSN: 2278-4772]. www.ayurpharm.com
https://www.researchgate.net/publication/301198328_ROLE_OF_KATIVASTI_IN_THE_MANAGEMENT_OF_SANDHIGATA_VATA_LUMBAR_SPONDYLOSIS_A_PILOT_STUDY



Shringa Avacharana in the management of Sandhigata Vata WSR to Lumbar spondylosis - A Pilot study[112]

PURPOSE: To evaluate the efficacy of Shringa Avacharana in the treatment of lumbar spondylosis.

MATERIALS AND METHODS:
STUDY DESIGN: An open labelled single armed prospective study of 16 diagnosed cases of *Sandhigata Vata* (lumbar spondylosis).
INCLUSION CRITERIA: Patients of age in b/w 40-70yrs having sign and symptoms of *Katisandhigatavata* i.e. *Shula*, *Katistambha, Akunchana Prasarane Pravrutti Savedna*.
EXCLUSIONCRITERIA: Patients having osteoarthritis other than spinal joints, spondylolisthesis, ankylosing spondylosis, PIVD, spondylitis and chronic backache due to any other pathology other than spondylosis were excluded.

PRADHANA KARMA: Dry and sterile modified *Shringa Yantra* cups were applied on the tender areas of back with a view to create negative pressure. After visible change in the colour of skin below the cups, the cups were removed. 15-20 pricks were made in skin with the help of disposable needle in demarcated area. After that, modified *Shringa Yantra* was again applied over the pricking site till complete haemostasis.

PASHCHAT KARMA: All the cups were removed after complete stoppage of oozing. Dusting of *Haridra Churna* was done just after that. Patient was allowed to get up from the lying down posture and advised to take honey and water after it. Application of any oil or cream was restricted. Same procedure was revised after 15 days interval in subsequent 4 sittings. It was advised to avoid *Vatavriddhika Ahara* and *Vihara* during the course of treatment and follow up period.

PRECAUTIONS: During course of treatment, all the patients were advised to take complete rest, avoid forward, backward bending and lifting of heavy objects. They were also restricted for *Vata Vardhaka Ahar* and *Vihar*. Placebo capsules were given in 1bd dose (500mg each) with luke warm water after the meal.

RESULTS: 54% relief was seen in *Kati Shula*, 93.5 % relief in *Kati Stambha* (stiffness), 60% relief in *Kati Suptata*, and 81.25% relief was found in restricted joint movements in *Raktamokshana* cases. 61.5% improvement was found in forward flexion of lumbo sacral joint, 50% improvement in lateral flexion and 90% improvement in extension of lumbar joint. 50% improvements were found in visual analogues scale, 47.5% improvement was found in straight leg raising test, 55.5% relief was found in Lasegue's test, 75% improvement was found in ODI score and 47.22% improvement was found in Schober's test.

CONCLUSION: *Raktamokshana* by *Shringa Avachrana* has shown remarkable results in the management of *Sandhigata Vata* especially due to *Margavaranajanya Samprapti*. Further evaluation of the aforesaid facts should be subjected to more studies in large populations for generalized results.

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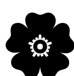
112. Foram Joshi, Mahanta VD. Dudhamal TS, Gupta SK. Shringa Avacharana in the management of Sandhigata Vata WSR to Lumbar spondylosis - A Pilot study. Ayurlog (National Journal of Research in Ayurved Science) -2017; 5 (Ayur Kaushalya special issue):53-63. [ISSN: 2320-7329] www.ayurlog.com
https://www.researchgate.net/publication/318969531_Shringa_Avacharana_in_the_management_of_Sandhigata_Vata_WSR_to_Lumbar_spondylosis_-_A_Pilot_study



Clinical study of Agnikarma and Panchatikta Guggulu in the management of Sandhivata (osteoartheritis of knee joint)[113]

PURPOSE: To study the effect of *Agnikarma* & *Panchatikta Gugglu* in the management of osteoarthritis of knee joint.

MATERIALS AND METHODS:

STUDY DESIGN: Open labelled randomized clinical trials of 33 patients suffering from *Sandhivata* were selected irrespective of their age, sex, religion, occupation, etc.

DIAGNOSTIC CRITERIA: Patients were diagnosed on the basis of signs and symptoms based on Ayurvedic as well as modern texts.

INCLUSION CRITERIA: Patients aged in b/w 45-70 years of either gender having signs and symptoms of *Vedana* (pain), *Sparshaasahyata* (tenderness), *Sandhisphutana* (crepitus) or *Sandhigraha* (stiffness), and *Sandhishotha* (swelling) in the knee were included in the study.

EXCLUSION CRITERIA: Patients below 45 years and above 70 years having systemic diseases such as diabetes mellitus, severe anemia, effusion of affected knee joint, rheumatoid arthritis, paralysis, Parkinson's disease, malignancy, and infectious diseases such as syphilis, leprosy, acquired immunodeficiency syndrome, and tuberculosis were excluded.

INVESTIGATIONS: Laboratory investigations such as blood sugar: FBS and PPBS, hemoglobin, TLC, DLC, ESR, serum uric acid, rheumatoid factor qualitative, and urine and stool (microscopic and macroscopic) were done at baseline and after treatment. The RF was done only once to exclude the possibility of other type of arthritis. X-ray of knee joint anteroposterior (AP) view and lateral view was taken before and after the treatment.

GROUPING AND POSOLOGY

Group A: *Agnikarma* by *Panchadhatu Shalaka* was done in 18 patients of *Sandhivata*.

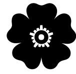
Group B: 2 tablets of *Panchatikta Guggulu* (each 500 mg) were administered 3 times a day after meals for 1 month along with *Agnikarma* by *Panchadhatu Shalaka* in 15 patients of *Sandhivata*.

{*Pancha Dhatu Shalaka* (innovated by Prof. P. D. Gupta) is made of *Tamra* (copper-40%), *Lauha* (iron-30%), *Yashada* (zinc-10%), *Rajata* (silver-10%), and *Vanga* (tin-10%)}.

RESULTS: In *Sandhishula*, 86% relief was found in Group A whereas 77.78% relief was obtained in Group B. *Sparshaasahyata* was reduced by 69% in Group A while 87.78% in Group B. 39% improvement was seen in *Sandhisphutana* in Group A while 46.67% relief was found in Group B. In *Sandhigraha*, 63% relief was obtained in each group.

CONCLUSION: *Agnikarma* alone and along with *Panchatikta Guggulu* oral intake has shown encouraging result on the cases of *Sandhivata* by providing relief to knee joint pain, tenderness, swelling, and also improving the ROM of knee joint. Hence, *Agnikarma* a non-pharmacological parasurgical modality was found to be useful in the management of *Sandhivata* (OA of knee joint).

113. Ruchi Pandey, Dudhamal TS. Role of *Ksharasutra* and *Kasisadi* ghrita in the management of *Stanagat Nadivrana* (Tubercular multiple breast sinuses) -A rare case report. International Ayurved Medical Journal 2017;5(7):2711-2718.[ISSN 2320-5091]. www.iamj.in
https://pubmed.ncbi.nlm.nih.gov/28827954/



Effect of Agnikarma (therapeutic heat burns) and Raktamokshana (therapeutic bloodletting) in the management of Kati Sandhigata Vata (lumbar spondylosis)[114]

PURPOSE: The study was aimed to evaluate and compare the effect of *Agnikarma* and *Raktamokshana* in the management of *Kati Sandhigata Vata* (lumbar spondylosis).

MATERIAL AND METHODS:

STUDY DESIGN: It was an open-label prospective comparative clinical study. Total 32 patients fulfilling the clinical criteria of *Kati Sandhigata Vata* (lumbar spondylosis) were enrolled for the study irrespective of their demographic divisions and allocated in two groups (group A and group B) by computer generated simple randomization.

INCLUSION CRITERIA: Patients suffering from *Kati Sandhigata Vata* (lumbar spondylosis) from the age group of 40–70 years of either sex were selected.

EXCLUSION CRITERIA: Patients suffering from uncontrolled diabetes mellitus, rheumatoid arthritis positive or any other autoimmune diseases, pregnancy, paralysis, parkinson's disease, severe anemia, malignancy, protrusion of lumbar disc and prolapsed inter-vertebral disc were excluded from this study.

METHODOLOGY:

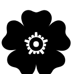
Group A (n=16): Patients were treated with *Agnikarma* procedure.
Group B (n=16): Patients were treated with *Raktamokshana* with modified *Shringa Yantra*.

RESULT: In group A, 50% patients got moderate relief and 50% patients got marked improvement of lumbar spondylosis. In group B, 25% of patients got moderate relief and 75% of patients got marked relief in signs and symptoms of lumbar spondylosis. No patient remained unchanged after treatment nor only had complete remission in the symptoms.

CONCLUSION: *Agnikarma* provided better relief in *Katishoola* (pain in lower back) and *Katisuptata* (numbness in lower back), whereas *Raktamokshana* provided better relief on *Katistambha* (stiffness in lower back).

Agnikarma procedure	*Raktamokshana* (Therapeutic bloodletting) procedure

114. Joshi F, Mahanta V, Dudhamal TS, Gupta SK. Effect of Agnikarma (therapeutic heat burns) and Raktamokshana (therapeutic bloodletting) in the management of Kati Sandhigata Vata (lumbar spondylosis). AYU 2019;40:79-88. [ISSN: p-0974-8520 e-0976-9382] www.ayujournal.com
https://www.researchgate.net/publication/340044825_Effect_of_Agnikarma_therapeutic_heat_burns_and_Raktamokshana_therapeutic_bloodletting_in_the_management_of_Kati_Sandhigata_Vata_lumbar_spondylosis



Leech application: an effective pain management option in osteoarthritis of knee joint-a case report[115]

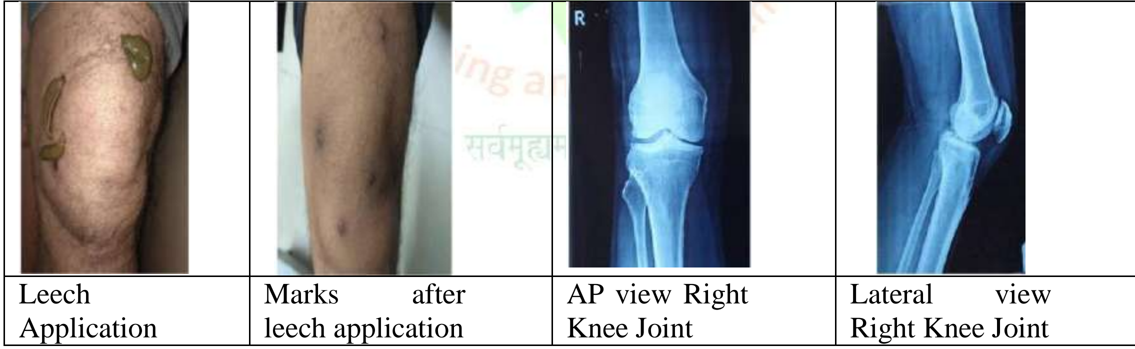
CASE DESCRIPTION: A 68 years old male had complaints of pricking intermittent pain and swelling in knee joint with stiffness of the right knee joint for 2 years. Pain increased during walking, climbing stairs and on squatting; and relived on rest. Stiffness present for 5-10 minutes at morning and 2-3 minutes after activities. Swelling was present at anterior site of right knee for whole day. No history of trauma or injury to right knee joint was found.
ON EXAMINATION: Minimal swelling, jenu varum deformity, pain (VAS) grade III, crepitus grade II, and restricted flexion and extension of right knee joint were present.

INVESTIGATION: Anterior-posterior and lateral view of right knee joint showed moderate joint space decreased, osteophytes formation, & presence of soft tissue swelling. Blood investigations were done before leech application. (Hemoglobin 14.1 gram%, ESR 12 mm/hr, bleeding time 1 min 30 sec. and clotting time 3 min 35 sec, RBS 110 mg/dl, serum uric acid 4.0 mg/dl, RA factor 7.8 mg/dl. HIV, HBsAg and HCV were found negative).

THERAPEUTIC INTERVENTION: Leeches were applied for two time at 15 days interval. Total duration of treatment was 1 month.

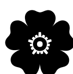
RESULT: Complete pain and stiffness relief in this patient was achieved within 30 days after 2 sitting of leech application. Normal range of movement was between 10˚ hyperextension and 130˚of flexion. Painful and restricted movement of knee joint converted into painless movement with reduction of soft tissue inflammation. Flexion angle of knee joint was 140˚ before the treatment which was increased to 130˚. Extension of the knee was painful before the treatment with normal range it was converted into painless movement. No change noted in joint space reduction, thereby changes in crepitus was not expected.

CONCLUSION: The painful condition of osteoarthritis of knee joint can be successfully treated using leech application. This method of leech application can be used in more number of cases for further validation.



Leech Application	Marks after leech application	AP view Right Knee Joint	Lateral view Right Knee Joint

115. Shiv Sagar, Kapadiya M, Dudhamal TS. Leech application: An effective pain management option in osteoarthritis of knee joint- A case report. Int. J. AYUSH CaRe. 2020; 4(2):70-74. [e-ISSN-2457-0443] http://www.ijacare.in
https://www.researchgate.net/publication/342832927_INTERNATIONAL_JOURNAL_OF_AYUSH_CASE_REPORTS_IJA_CARE_Int_J_of_AYUSH_Case_Reports_April-June_2020_42_70_Leech_application_An_effective_pain_management_option_in_osteoarthritis_of_knee_joint-_A_case_rep



Effect of Agnikarma along with Panchatikta Guggulu in the management of Janusandhigatavata (osteoarthritis of knee joint)[116]

PURPOSE: To study the efficacy of Agnikarma with or without Panchatikta Guggulu in the management of OA knee joint.

MATERIAL AND METHODS:

STUDY DESIGN: An open labelled randomized clinical trial on 41 patients of OA knee joint.

INCLUSION CRITERIA: Patients between the age group 35 to 70 years of either gender suffering from *Janusandhigatavata* (knee OA) with symptoms of pain, tenderness, stiffness & restricted joint movements were included in this study.

TREATMENT:

Group A: *Agnikarma* with *Panchadhatu Shalaka* was done in 21 patients of *Sandhigatavata*. In total 15-20 *Bindu Dagdha* were done at the most tender site of affected knee joint. After *Agnikarma, Haridra* powder was sprinkled on wound & patient was advised to avoid water contact for minimum 24 hours, and also to apply *Madhu* and *Ghrita*. Same intervention was adopted at every 7 days interval for 4 times. (Components of *Pancha Dhatu Shalaka* is: *Tamra* (copper) 40%, *Loha* (iron) 30%, *Yashada* (zinc) 10%, *Rajata* (silver) 10% and *Vanga* (tin) 10%.

Group B: *Agnikarma* with *Panchadhatu Shalaka* was done in 20 patients of *Sandhigatavata* as told above with oral administration of *Panchatikta Guggulu* (500mg) two tablets thrice a day.

RESULTS:

In Group-A (*Agnikarma* alone) among subjective parameter statistically high significant results were seen in *Sandhishula* (pain) (86.36%), *Sparshaasahyata* (tenderness) 71.79% and in *Sandhigraha* (stiffness) 52.77% cases, and statistically significant result were seen in *Sandhisphutana* (crepitus) 27.58% cases. Among objective parameter, statistically significant results were seen in swelling cases at all 3 sites and in ROM in flexion 23.41% and extension 36.36%.

In Group-B (*Agnikarma* along with *Panchatikta Guggulu*) statistically extremely significant results were seen in *Sandhishula* (pain) (88%), *Sparshaasahyata* (tenderness) 87.80% and in *Sandhigraha* (Stiffness) 83.87%.Significant result seen in *Sandhisphutana* (crepitus) 36.66%. Among objective parameter statistically significant results were seen in swelling at all 3 sites and in ROM for flexion (24.04%) and extension (44.44%).

CONCLUSION: Statistically highly significant results were found in both groups; however comparatively better relief was found in Group B (*Agnikarma* along with *Panchatikta Guggulu*) as compared to Group A (*Agnikarma* alone) in all subjective and objective parameters. *Agnikarma* alone has a definite role in reducing the knee joint pain and tenderness; in addition of *Panchatikta Guggulu* it yielded convincing results in case of stiffness, swelling and difficult ROM of knee joint.

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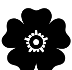
116. Pandey Ruchi, Dudhamal TS Effect of Agnikarma along with Panchatikta Guggulu in the management of Janusandhigatavata (Osteoarthritis of Knee Joint). Journal of Ayurved Campus (JAC). 2020; 1(1): 1-6. [eISSN:2738-9774 pISSN:2738-9871]. www.jacjournal.org
https://www.researchgate.net/publication/350335350_Effect_of_Agnikarma_along_with_Panchatikta_Guggulu_in_the_management_ofJanusandhigatavata_Osteoarthritis_of_Knee_Joint



Management of Janusandhigata Vata w.s.r. to osteoarthritis of knee joint with modified method of Agnikarma by the use of electrocautery- a case report[117]

CASE DESCRIPTION: A 60-years-old male patient had complaints of pain and stiffness in left knee joint with difficulty in walking due to pain since last 1 year. The patient revealed a history of worsening of pain in the affected area after longtime standing since last 1 year. There was no relevant past history. Patient was a known case of hypertension and was taking tab. telmisartan 40 mg once daily in morning before breakfast with plain water as con current medicine.

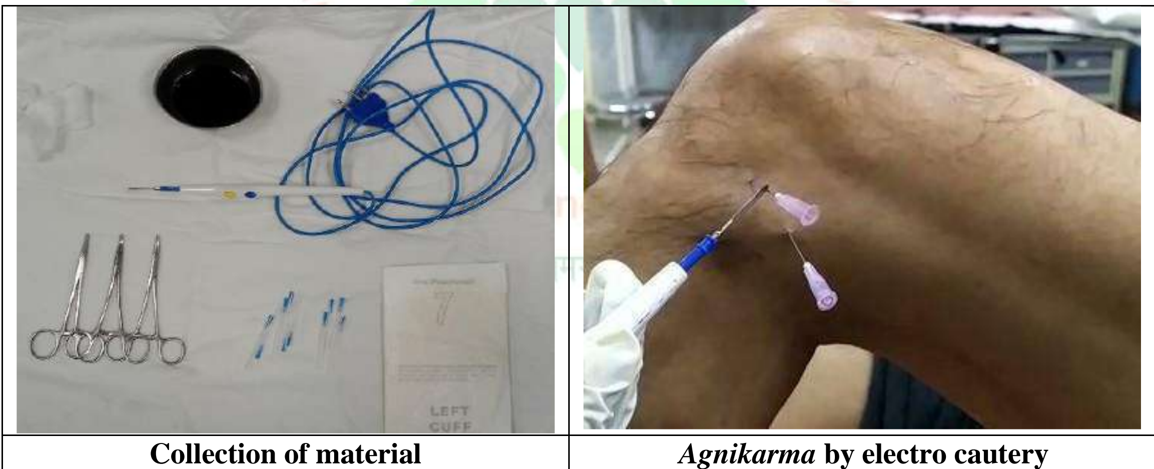
EXAMINATION OF LEFT KNEE JOINT: Tenderness and crepitus (palpable) was present. Range of movement was restricted and pain full.

INVESTIGATION: CBC, RBS, CT, BT, ESR, and R.A. factor (quantitative) were in normal limit; and HIV, HBsAg, VDRL and HCV tests were non-reactive. X-ray of left knee joint: definite narrowing of joint space and definite osteophytes development. KL radiological grading: Grade 2.

THERAPEUTIC INTERVENTION: *Agnikarma* by electro cautery, a total 4 sittings at 7 days interval i.e., on 0, 7th, 14th and 21st day.

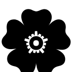
RESULT: After 4th sitting of treatment, patient had no pain, crepitus (palpable) was present, stiffness was absent, & range of movement was increased.

CONCLUSION: The result obtained in this single case report advocate that *Agnikarma* with electro cautery have satisfactory result in relieving the sign and symptoms of *Janusandhigata Vata*.



Collection of material	***Agnikarma* by electro cautery**

117. Krishna Rathod, Neeraj Ku, Dudhamal TS. Management of Janusandhigata Vata w.s.r. to Osteoarthritis of knee joint with modified method of Agnikarma by the use of electrocautery- A Case Report. International Journal of AYUSH Case Reports. 2022; 6(3): 318-324. [e-ISSN-2457-0443] http://www.ijacare.in https://www.researchgate.net/publication/364127496_INTERNATIONAL_JOURNAL_OF_AYUSH_CASE_REPORTS_IJA-CARE_Management_of_Janusandhigata_Vata_wsr_to_Osteoarthritis_of_knee_joint_with_modified_method_of_Agnikarma_by_the_use_of_electrocautery-A_Case_Report



Leech therapy as an alternative therapy for osteoarthritis of the knee joint-a case series[118]

PURPOSE: To evaluate the efficacy of leech therapy in the management of OA knee joint.

MATERIAL AND METHODS:
STUDY DESIGN: An open labelled single armed prospective clinical trial on 5 patients of OA knee joint.
INCLUSION CRITERIA: Patients having signs and symptoms of osteoarthritis of the knee joint (clinical symptoms of knee osteoarthritis were assessed on the basis of grading of pain (VAS), crepitus, stiffness, and knee joint ROM like flexion and extension).
INVESTIGATIONS: X-ray of the left knee demonstrated OA changes and osteophyte formation in knee joints. CBC, RBS, Serum uric acid, bleeding time, clotting time and RA factor were found within normal limit, and virology profiles like HIV, HBsAg, HCV and VDRL were non-reactive in all patients.

THERAPEUTIC INTERVENTION: All cases were managed through two sittings of leech application in 15 days interval.

RESULTS: There were changes in clinical signs, symptoms of knee joint pain, crepitus and stiffness in all patients with flexion affected in all patients while extension was affected in only one patient. After two sittings of leech application, noticeable knee pain decreased in all cases. Improvement in crepitus from grade 2 to 1 observed in all cases except case 4. Among 5 cases, stiffness completely resolves in three cases. Most of the patients presented with normal extension except only one case which was improved from170° to 180°. Flexion upgraded from 140° to 130° in three cases while two cases upgraded from 150° to 130°. All cases reached up to normal flexion of knee joint. Changes noted in Hb and ESR after leech application was insignificant.

CONCLUSION: Leech therapy led to fast and relevant symptomatic relief in painful conditions like osteoarthritis of knee joint as found in five cases. Considering the side effect of long-term use of NSAID and analgesics, limited options of conventional treatment and the increasing healthcare burden of knee osteoarthritis, this effective and traditional alternative modality should be evaluated in larger samples for longer observation periods.

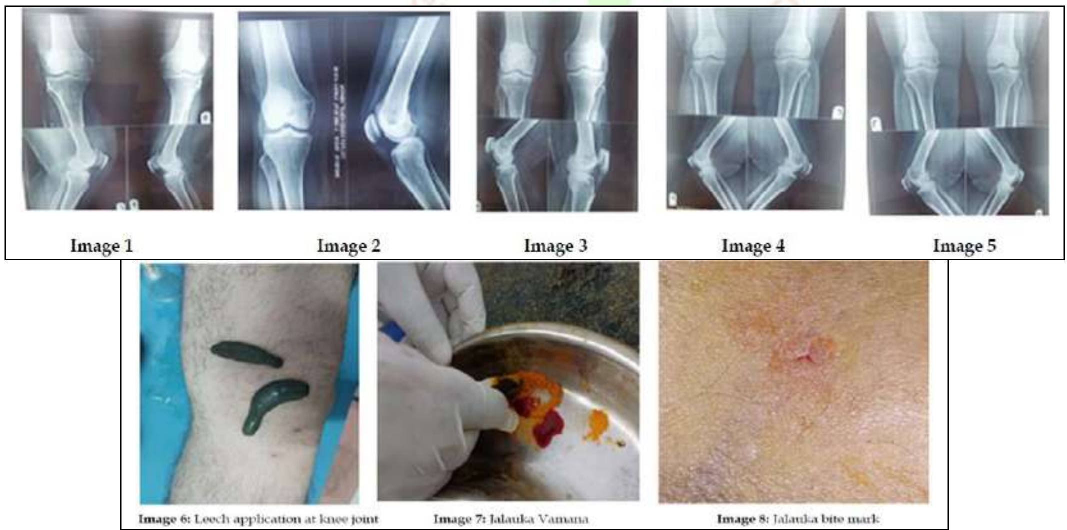
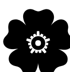


Image 1 Image 2 Image 3 Image 4 Image 5

Image 6: Leech application at knee joint Image 7: Jalauka Vamana Image 8: Jalauka bite mark

118. Tukaram Dudhamal, Shiv Sagar, Manisha Kapadiya/Leech Therapy as an Alternative Therapy for Osteoarthritis of the knee joint- A Case Series/Indian J of Ancient & Yoga. 2023;16(1): 35–39. https://www.researchgate.net/publication/368307795_Leech_Therapy_as_an_Alternative_Therapy_for_Osteoarthritis_of_the_Knee_Joint_A_Case_Series



Role of *Raktamokshana* in the management of *Vicharchika* (Eczema)[119]

PURPOSE: To evaluate the efficacy of *Raktamokshana* in the management of *Vicharchika*

MATERIAL AND METHODS:

STUDY DESIGN: In this randomised clinical trial the patients suffering from complaints of *Vicharchika* were selected and divided into two groups according to their sign and symptoms.

DIAGNOSTIC CRITERIA: Investigations i.e. TLC, DLC, RBC, Hb%, ESR, urine routine & stool examination were carried out.

SELECTION CRITERIA: Patients having complaints of *Kandu, Srava, Vedana, Vyaivarnya, Pidaka, Visarpana, Daha, Rukshata*, etc. were selected irrespective of age, sex, religion, education, etc.

INCLUSION CRITERIA: Patients with classical symptoms of localised *Vicharchika* and *Sarvanga Vicharchika* were included.

EXCLUSION CRITERIA: Known cases of skin malignancies, tuberculosis and STDs were excluded.

PROCEDURE OF *JALAUKAVACHARAN* (LEECH APPLICATION): Patient was asked to sit or lie down comfortably as per the site of application. *Jalauka* was applied at the site of lesion. When it started sucking of blood the *Jalauka* was then covered with a fine white wet cloth except the mouth. After completion of the procedure the *Raktastambhaka Yoga* was applied to prevent excessive oozing. Dressing was done with *Shatadhauta Ghrita*.

PROCEDURE OF *SIRAVYADHA* (VENEPUNCTURE): Patient was asked to lie down in supine position. Vein nearer to affected site was made prominent by using a tourniquet. In most of the cases the affected parts were one leg or both legs. Puncture was made with 16 no. needle. The tourniquet was removed immediately after puncture of the vein. It was allowed to ooze for 5 minutes. Then the needle was taken out, and dressing was done with *Shatadhauta Ghrita*.

RESULTS: Out of 34 cases of *Jalauka* application 28 cases were cured, whereas 6 cases showed improvement except in symptoms of *Syavata* (blakish discoloration) and *Rukshata* (dryness) where there was no change. In *Jalauka* group, 7 patients took one week for complete cure, while 2 patients had taken 9 weeks to cure and maximum patients were cured within second week of treatment.
Out of 20 cases treated by *Siravyadha*, 14 cases were cured and 6 improved. In *Siravyadha* group, 6 cases were cured within one week, while 2 cases took 4 weeks for complete cure.

CONCLUSION: The group treated with *Jalauka* showed complete cure in 82.35 % of the cases whereas patients with *Siravyadha* treated group showed 70% cured rate. It was observed that patients showed more willingness for application of *Jaluaka* rather than use of *Siravedha* as the treatment modality.

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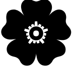
119. Chaturbhuja Bhuyan, T. S. Dudhamal, S. K. Gupta. Role of Raktamokshana in the management of Vicharchika (Eczema). Chaturbhuja Bhuyan *et al*. Indian Journal of Ancient Medicine and Yoga. July-Sept 2009; Vol. 2 No. 3. (pISSN 0974- 6986, eISSN 0974 –6994)
https://www.rfppl.co.in/subscription/upload_pdf/Role%20of%20Raktamokshana%20in%20the%20management%20of%20Vicharchika%20(Eczema)_428.pdf



Comparative assessment of Jalaukavacharana (Leech Application) and Shringavacharana (Horn Application) in Vicharchika[120]

PURPOSE: To evaluate and compare the efficacy of *Jalaukavacharana* (leech application) and *Shringavacharana* (horn application) in the management of *Vicharchika* w. s. r. to Eczema.

MATERIAL AND METHODS:

STUDY DESIGN: This study was an open levelled randomized clinical trial done at Shalya Tantra OPD/IPD levels of IPGT&RA, Jamnagar.

INCLUSION CRITERIA: Patients aged between 10- 70 years with classical signs and symptoms of *Vicharchika* like *Kandu, Vaivarnyata, Srava, Shotha, Vedana, Pidaka* etc were included.

EXCLUSION CRITERIA: Patients using systemic antibiotics or antimycotic drugs in the previous 4 weeks, and known cases of AIDS (HIV Positive), tuberculosis, anaemia, cardiac diseases, leprosy, hepatitis A/B/C were excluded.

INVESTIGATIONS: Routine hematological investigations like RBS, TLC, DLC, Hb%, ESR, PCV, L.F.T., R.F.T, Lipid Profile and routined analysis for Macroscopic and Microscopic.

GROUPING:

Group A (n=30): One sitting per week of *Jalaukavacharana* (leech application) was done for treatment of *Vicharchika* (eczema) for a period of 4 weeks.

Group B (n=32): One sitting per week of *Shringavacharana* (horn application) was done for treatment of *Vicharchika* (eczema) for a period of 4 weeks.

RESULTS: In group A cardinal symptoms like *Kandu, Vaivarnyata, Raji, Rukshata*, size of patches, *Pidaka* showed significant relief (p value <0.001), while other symptoms like *Vedana, Shotha, Srava* showed statistically insignificant results. In group B also the cardinal symptoms showed highly significant results.

The haematological and biochemical laboratory investigations showed insignificant results.

On comparison both group A and group B patients showed highly significant results (i.e., p value <0.001), though percentage improvement in the cardinal symptoms were better noted in group A patients.

CONCLUSION: The outcome of present clinical trial show highly significant results in both groups with p value <0.001 showing that both the methods of *Raktamokshana* be it *Jalaukavacharana* or *Shringavacharana* are both effective in the management of *Vicharchika.*

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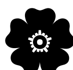
120. Manoj L. Sonaje, Dhiman K. S, Bhuyan C, Gupta S. K, Dudhamal T. S.; Comparative assessment of Jalaukavacharana (Leech Application) and Shringavacharana (Horn Application) in Vicharchika; International Journal of Ayurvedic Medicine, 2011, 2(4), 220-232; [ISSN: 0976-5921] http://ijam.co.in

https://www.researchgate.net/publication/348888901_Comparative_assessment_of_Jalaukavacharana_Leech_Application_and_Shringavacharana_Horn_Application_in_the_management_of_Vicharchika



Comparative evaluation of Siravyadha (Venepuncture) and Shringavacharana (Horn application) in the management of Vicharchika w. s. r. Eczema[121]

PURPOSE: To evaluate the comparative efficacy of *Siravyadha* (venepuncture) and *Shringavacharana* (horn application) in the management of *Vicharchika* w. s. r. Eczema.

MATERIAL AND METHODS:

STUDY DESIGN: An open labelled randomized clinical trial with two groups was done on the cases of *Vicharchika* (eczema) irrespective of their age, sex, religion, occupation, caste, creed etc.

INCLUSION CRITERIA: Patients aged between 10 to 70 yrs with presenting classical sign and symptoms of *Vicharchika* (eczema) like *Kandu, Vaivarnyata, Strava, Shotha, Vedana, Pidaka* etc were included.

EXCLUSION CRITERIA: Patients using systemic antibiotics or anti-mycotic drugs in the previous four weeks or known cases of AIDS (HIV positive), tuberculosis, anaemia, cardiac diseases, leprosy, Hepatitis A/B/C were excluded from the study.

INVESTIGATIONS: Routined hematological investigations like RBS, TLC, DLC, Hb%, ESR, PCV, L.F.T., R.F.T, Lipid Profile and urine examination was done.

METHODOLOGY:

Methodology	Group A	Group B
Modality	*Siravyadha*	*Shringavacharana*
Frequency	One sitting per week	One sitting per week
Period of trial	30 days (4 week)	30 days (4 week)
Diet	To follow appropriate diet	To follow appropriate diet

RESULTS: In Group A, cardinal symptoms like *Kandu, Vaivarnyata, Raji, Rukshata*, size of patches or *Pidaka* showed statistically significant results, while other symptoms showed improvement without statistically significant results. Group B patients showed highly significant results in cardinal symptoms. Apparently there was no such remarkable improvement seen in case of haematological and biochemical lab investigations except some exceptions. In Group A, after treatment, RBC count, Hb %, PCV %, neutrophil count showed significant decrease while other investigations showed insignificant changes. In Group B, bleeding time after treatment showed significant decrease, while other investigations showed insignificant changes.

CONCLUSION: The *Raktamokshana* methods of *Siravyadha* and *Shringavacharana* are both found to be effective in the management of *Vicharchika*. *Siravyadha* was found to be more efficient with least complications like reduction in Hb%. Henceforth, it may be concluded that both these modalities are effective in managing all kinds of *Vicharchika*.

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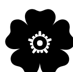
121. Manoj L. Sonaje, K. S. Dhiman, C. Bhuyan, S. K. Gupta, T. S. Dudhamal; Comparative Evaluation of *Siravyadha* (Venepuncture) and *Shringavacharana* (Horn Application) in the management of *Vicharchika* w. s. r. Eczema; Indian Journal of Ancient Medicine and Yoga Volume 5 Number 1, January - March 2012; https://www.researchgate.net/publication/348888901_Comparative_assessment_of_Jalaukavacharana_Leech_Application_and_Shringavacharana_Horn_Application_in_the_management_of_Vicharchika



Management of Vicharchika (Eczema) with Securinega leucopyrus and sesame oil: a case study[122]

CASE DESCRIPTION: A male patient of age 45 year had complaints of eczema and ulcers in fingers of left hand since two months. He had complaints of severe throbbing pain, watery discharge, itching and swelling of first, middle and ring fingers of left hand with superficial ulcerations. Patient's is an auto driver working for 6-8 hours daily. Patient reported history of tea, smoking bidi and alcohol addiction. He had no related history of cardiac diseases, diabetic mellitus, tuberculosis, venereal diseases, bronchial asthma, anaemia and any other major illness.

ON EXAMINATION: Local examination revealed that there were small wounds at first, middle and ring fingers with serous discharge and swelling of hand.

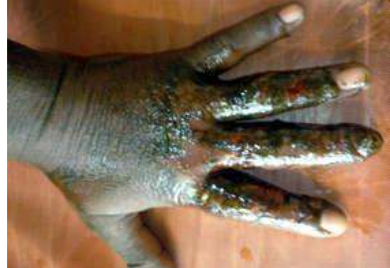
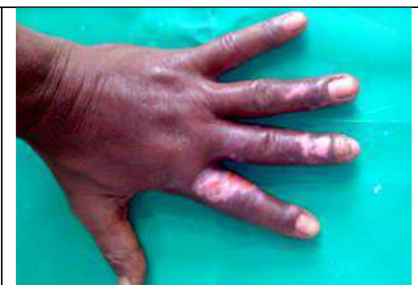
INVESTIGATION: Routine blood investigation like CBC, blood sugar level and sr. creatinine were normal except increased white blood corpuscles (WBC) and neutrophil counts.

X-Ray of left had showed that distal phalanx of second finger showed mild infective changes with soft tissue swelling. So, this case was diagnosed as *Vicharchika* (eczema with cellulitis).

THERAPEUTIC INTERVENTION: All the affected part was cleaned with normal saline and then S. leucopyus leaves powder mixed with sesame oil was applied. The left hand was kept elevated with collar and sling.

RESULT: In first consultation patient had severe throbbing pain, watery discharge, itching and swelling of first, middle and ring fingers of left hand with superficial ulcerations. The symptoms like throbbing pain, swelling and watery discharge was reduced, and the fingers became clean with mild swelling and superficial ulceration within 7 days. Treatment continued daily in the morning, and superficial ulcerations, swelling was relieved promptly. All symptoms of *Vicharchika* that is eczema, swelling, pain, ulcerations were relieved with white scars on the fingers within 15 days.

CONCLUSION: Leaf powder of *Securinega leucopyrus* mixed with sesame oil is effective in the management of *Vicharchika* (eczema with cellulitis) and needs further evaluation.

		
Vicharchika with cellulitis before treatment	Applied S. *leucopyus* leaves powder and sesame oil	After 15 days treatment with scar

122. Dudhamal TS, AS Ajmeer, C. Bhuyan. Management of Vicharchika (Eczema) with Securinega Leucopyrus and Sesame Oil: A Case Study. Indian Journal of Ancient Medicine and Yoga. 2015;9(1): 21-23. [ISSN: p-0974-6986, e-0974- 6994] www.rfppl.com.
https://www.researchgate.net/publication/301796907_Management_of_Vicharchika_Eczema_with_Securinega_Leucopyrus_and_Sesame_Oil_A_Case_Study

Clinical efficacy of external application of Dhanvayas (Fagonia indica Burm.f.) powder in the management of Vicharchika (Venous Stasis Dermatitis) - Two case Reports[123]

CASE DESCRIPTION

Case 1: A 52 year old male patient presented with pustules, scaly desquamation of epithelium, pruritus and watery discharge over medial and lateral aspect of left foot since last 3-4 months.

Case 2: A 47 year old male patient having scaly desquamation of epithelium, pruritus and mild serous discharge over right ankle joint and ankle oedema since 2 months.

ON EXAMINATION

Case 1: A physical examination confirmed that these cutaneous changes were associated with venous insufficiency.

Case 2: Scaly desquamation of epithelium, pruritus and mild serous discharge over right ankle joint and ankle oedema.

THERAPEUTIC INTERVENTION

Case 1: Clinical diagnosis of *Vicharchika* (stasis dermatitis) was reached and managed with daily application of paste of *Dhanvayas* powder mixed with normal saline on the affected part. Then it was covered with gauze piece and applied bandage. The dressing was continued for 3 weeks once daily in the morning. The patient was advised for elevation of foot during night. Along with this local treatment, *Khadirarista* was administered 25 ml after meal two times a day.

Case 2: Clinical diagnosis of stasis dermatitis was reached and managed in a similar manner as described in the above case.

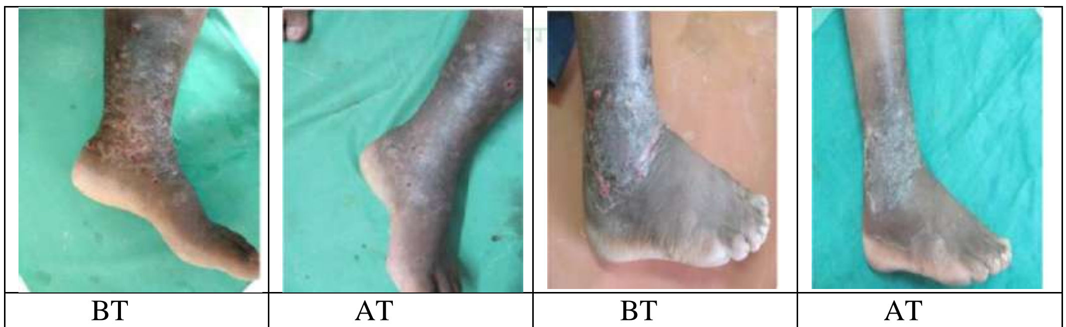
RESULT

Case 1: After application of *Dhanvayas*, there was relief in discharge, itching, and complete remission of lesions. After 3 week there was remission of all the symptoms except the dark pigmentation.

Case 2: There was complete remission of lesions.

CONCLUSION:

Dhanvayas is effective in the symptomatic relief on local application in the management of *Vicharchika*. The drug is safe and tolerable without adverse effect. As for the scientific validation data of two cases are not enough, study should be evaluated further in large samples.



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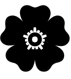
123. Ghodela NK, Dudhamal TS. Clinical efficacy of external application of Dhanvayas (*Fagonia indica Burm.f.*) powder in the management of Vicharchika (Venous Stasis Dermatitis) - Two case Reports. Journal of Research in Traditional Medicine (J. Res. Tradit. Med) 2016; 2(6): 162-165. www.tmjournal.com https://www.researchgate.net/publication/316837423_Clinical_efficacy_of_external_application_of_Dhanvayas_FagoniaindicaBurmf_powder_in_the_management_of_Vicharchika_Venous_Stasis_Dermatitis_-_Two_case_Reports



Effect of an Ayurveda treatment for chronic palmoplantar eczema: an experience[124]

CASE DESCRIPTION: A 29-year-old female patient had complaints of hyperkeratotic palmoplantar eczema with swelling and pus discharge from both feet for the past 3 days. Thick whitish scaling was presented on both the palms and soles for the past 9 months. Itching and hyper pigmented lesion are seen in both the palm and sole for 1 year. The patient had a mild fever for 3 days. The patient also had symptom of *Vidagdhajirna* such as chest burning, sour belching, constipation, and disturbed sleep due to itching. The patient was habituated to tea 4 times a day and also had the routine of drinking milk for dinner daily since childhood.

ON EXAMINATION: Sharply demarcated, hyperkeratotic, and fissured lesions were observed in the plantar surface of both the feet and the palmar surface of hands involving fingers also. There was a pustule with pus discharge from fissures and grade 3 tenderness at the plantar surface. The intertarsal gutter of both feet was obliterated due to inflammation.

INVESTIGATION: A total count of 11.000/mm_3, ESR 40 mm/h, RBS 128 mg/dl, and serum creatinine 0.9 mg/dl; HIV and HBsAg showed nonreactive results. Discharge from the pustule was collected and sent for culture. *Klebsiella pneumoniae* isolated from wounds was revealed by pus culture.

THERAPEUTIC INTERVENTION: On the 1st day of consultation, mechanical debridement of the lesion was done, and pustule on the plantar surface was explored, *Triphala Kwatha* wash was given, and packing was done with *Yashtimadhu Malahara* for 1 month. Tablet *Sanjivani Vati* (125 mg) four times a day (for 15 days), *Pathyadi Kwatha* 20 mL (for 2 months) with *Avipattikara Churna* 3 gm (for 2 months) on empty stomach was advised. *Pathya-Apathya* was advised to the patient for 3 months. The *Siravedha* was done on 16th day in both feet on the same day with 18 no scalp vein. 25 mL bloodletting from the right foot and 30 mL bloodletting from the left foot done.

RESULTS: Symptoms such as scaling, itching, and hyperpigmented lesion markedly decreased in both the palm & sole. Inflammation in the feet and pus discharge was also completely decreased, & no pustules were seen after 15 days of treatment. The itching completely resolved after *Siravedha* on both feet. After 1 month of treatment, hyperpigmentation was 90% resolved in both palms. Fissures with infected wounds partially healed, epithelialization was seen, & scaling was completely arrested. After 2 months of treatment, 95% of the eczematous lesions were solved, & the skin became normal in the soles, while 100% improvement was noted in both palms. 100% of lesions were resolved in the sole after 3 months of treatment. Hyperkeratosis, fissuring, scaling, itch, redness, & vesicle count were considered parameters of a semiquantitative score. A semiquantitative score of six parameters was 10 before the treatment, & it was reduced to 0 after 3 months of treatment. Follow-up was taken at 1&2 year interval after the completion of treatment to observe whether the disease passes through six *Ritu* (six seasons), & there was no recurrence of the disease.

CONCLUSION: Hyperkeratotic palmoplantar eczema can be successfully managed through rejuvenating Ayurveda treatment.

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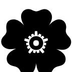
124. Kapadiya, Manisha & Dudhamal, Tukaram. (2024). Effect of an Ayurveda treatment for chronic palmoplantar eczema: An experience. BLDE University Journal of Health Sciences. 8. 300-304. 10.4103/bjhs.bjhs_14_23.
https://www.researchgate.net/publication/377306309_Effect_of_an_Ayurveda_treatment_for_chronic_palmoplantar_eczema_An_experience



Role of Paneeya Kshara of certain indigenous formulation (Anandayoga) in the management of Mootrashmari.[125]

PURPOSE: To evaluate the therapeutic efficacy of '*Anandyoga'* (*Paneeya Kshara* of certain indigenous herbs) in the management of *Mootrashmari*.

MATERIALS AND METHODS:
STUDY DESIGN: This study was an open levelled randomized controlled clinical trial with 20 patients in each group. Patients of *Mootrashmari* (Urolithiasis) were selected randomly irrespective of their age, sex, religion, occupation, caste, creed etc.
DIAGNOSTIC CRITERIA: Diagnosis was made on the basis of clinical sign and symptoms, X-Ray KUB and USG findings.
INCLUSION CRITERIA: Patients of age group in between 20-60 years with classical symptoms of *Mootrashmari* and renal calculus below 20 mm in size were included.
EXCLUSION CRITERIA: Patients contraindicated for *Paneeya Kshara*, below 20 years & above 60 years of age, and patients of *Shukrashmari* or with uncontrolled diabetes mellitus & hypertension and systemic illness like TB, HIV etc were excluded. Patients with obstructive pathogenesis like BPH, urethral stricture, etc, or patients associated with complication like pyonephrosis, glomerulonephritis, chronic renal failure (CRF) and pregnant female patients were also not considered.

INVESTIGATIONS: Blood examination for Hb%, TLC, DLC, ESR, Blood urea, Serum creatinine; and Urine analysis (as per requirement) was done for: physical - color, pH, specific gravity, reaction, sugar, albumin, and microscopic presence of RBC, casts, crystals, epithelial cells or pus cells.

DRUG POSOLOGY: Patient was advised to take 250 mg twice a day of *Anandayoga* (*Paneya Kshara* of five herbs) 30 minutes before food with *Anupana* of *Avimootra Arka* (prepared from urine of sheep with standard distillation methods) for a period of 60 days.

RESULT: After completions of the treatment course none of the patients reported severe pain in abdomen; only two patients suffered from mild pain in abdomen.
Dysuria was relieved in all the 14 patients.
A total of 24 renal stones were recorded taking all the cases collectively out of which 16 stones showed significant reduction in size and 8 stones remained unchanged for size after the completion of the treatment. Among these <25% reduction in size was recorded in 9 stone, 7 stones showed 25 to 50% reduction, and >50% reduction was noted in 4 stones.
On urine analysis 15 patients were found to have pH 7, 3 patients had urine pH of 4, whereas one patient was with the urine pH of 8 before the administration of the drug. After treatment, the urine pH was found to be maintained at 7 in all the patients.
No significant changes were observed in laboratory investigations after treatment.

CONCLUSION: The main features like abdominal pain, dysuria, burning micturition, size of the stone showed remarkable changes ensuring the efficacy of the drug in combating cases of *Mootraashmari* (urinary calculus). The lithotryptic action of the *Anandayoga* was significant and the *Yoga* (formulation) was found to be effective in maintaining the neutral level of urine pH. Any untoward effect of the therapy was not noted.

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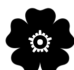
125. Manoj L Sonaje et.al., Role of Paneeya kshara of certain indigenous formulation (Anandayoga) in the management of Mootrashmari [ISSN: 0976-5921] http://ijam.co.in https://www.researchgate.net/publication/277328232_Role_of_Paneeya_Kshara_of_Certain_Indigenous_Formulation_Anandayoga_in_the_Management_of_Mootrashmari



Clinical effect of Ashmarihara Kwatha in the management of Mootrashmari (urinary calculus)-short communication[126]

PURPOSE: To study the efficacy of *Ashmarihara Kwatha* in the management of urinary calculus.

MATERIAL AND METHODS:

STUDY DESIGN: An open labelled single arm trial of 20 patients of *Mootrashmari* (Urolithiasis) having sign & symptoms like: pain in the renal angle and loin region radiating towards groin, burning micturition, hematuria and vomiting.

INCLUSION CRITERIA: All the patients aged in b/w 18-60 years with stone in kidney or/and ureter up to the size of 15 mm were included in the study.

EXCLUSION CRITERIA: Stone size more than 15 mm with severe hematuria and renal failure were excluded. Patients of carcinoma, tuberculosis, HIV, Hepatitis-B, VDRL positive cases were also excluded from the study.

INVESTIGATION: Hb%, CBC, ESR, FBS. blood urea, serum: creatinine, uric acid, calcium; urine examination: routine & microscopic; plain X-ray abdomen and USG for kidney, ureter and bladder were done before and after treatment.

THERAPEUTIC INTERVENTION: *Ashmarihara Kwatha*, 20 ml with thrice a day was given for 60 days. The patients were assessed on the basis of the subjective parameter [pain in abdomen, hematuria, and dysuria] and objective parameters [size of stone, site of stone and number of stones] before and after treatment. All the patients were advised to take similar dietary regimen. The duration of treatment was 60 days and clinical assessment was done in every 15th day interval.

RESULT: A total of 21 stones with size less than 5 mm were found in all the patients treated with *Ashmarihara Kwatha*, out of which 9 were expelled out, 3 were decreased in size, no change was observed in 1 stone while 8 stones increased in size. 14 stones of 6-10 mm size were found, out of which 5 stones were expelled out, 3 stones were decreased in size, no change was observed in 3 stones while 3 stones were increased in size. And 13 stones of more than 10 mm size were found, out of which 2 stones were expelled out, 7 stones were decreased in size, no change was observed in 4 stones while no stone was found to be increased in size.

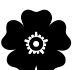
Among a total of 48 stones found in all the patients, 46 kidney stones of different sizes were found in 20 completed cases. 32.61% stones were expelled out, 28.26% stones were found with decreased size and no change was observed in 15.22% stones, while increase in stone size was observed in 23.91% of stones.

Out of 48 stones, 2 ureteric stones of different sizes found in 20 completed cases. One (50.00%) stone was expelled out and one another (50.00%) stone was found with no change in size.

Out of 20 patients in this study, 8 patients (40.00%) were cured, 6 patients (30.00%) showed got marked improvement, 4 (20.00%) patients showed moderate improvement, and no improvement was seen in 2 (10.00%) patients.

CONCLUSION: *Ashmarihara Kwatha* showed symptomatic relief in the management of *Mootrashmari* (urinary calculus). Further studies should be done with comparison to standard controlled group for its scientific validation.

126. Monika Kumari, Dudhamal TS, Solanki SK. Clinical effect of Ashmarihara Kwatha in the management of Mootrashmari (Urinary calculus) - Short communication. Int. J. AYUSH CaRe. 2017;1(2):32-36. [ISSN: e 2457-0443]. www.ijacare.in
https://www.researchgate.net/publication/322721585_Clinical_effect_of_Ashmarihara_Kwatha_in_the_management_of_Mootrashmari_Urinary_calculus-Short_communication



Ayurved management of Mootrashmari (ureteric calculus): a single case study[127]

CASE DESCRIPTION: A 45 year old male patient had complaint of progressive increasing pain in left loin (radiating towards groin region) associated with nausea and vomiting since 3 months. There was presence of dysuria at the beginning of urination with decreased frequency of urination (1 to 2 times / day). There was no any history of diabetes or hypertension. All vitals were within normal limits.

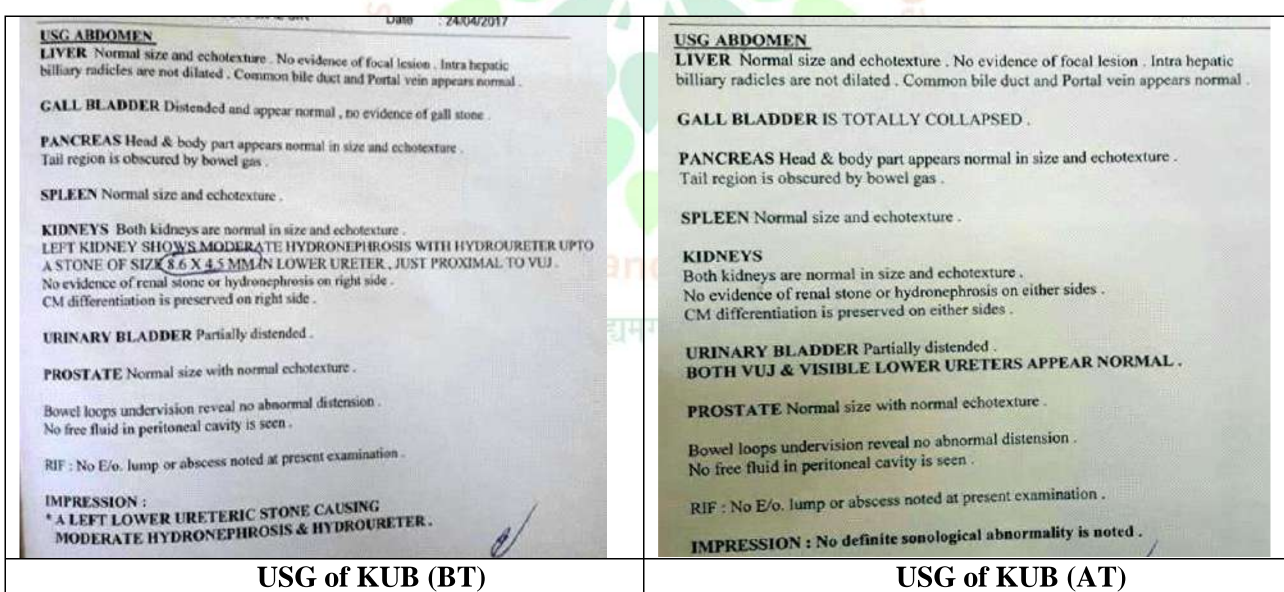
ON EXAMINATION: On physical examination of abdomen, patient had intermittent and colicky pain in left hypochondrium radiating to the left back portion. According to Ayurveda, majority of clinical features of *Mutrashmari* such as *Udarpradesha Vedana, Sadaha Mutrata* and *Mutrasanga* were observed.

INVESTIGATION: USG investigation found that there was presence of stone of 8.6 mm x 4.5 mm and location was in the in left lower ureter associated with moderate hydro nephrosis and hydro ureter.

THERAPEUTIC INTERVENTION: Mixture of *Gokshura Churna* (5 gm) with *Banga Bhasma* (60 mg) BD with luke warm water after meal. *Punarnavashtaka Kwatha* 20 ml BD after meal. With this medication, the patient was advised to follow *Pathya-Apathya* chart.

RESULT: After 6 weeks, Patient visited OPD with collected stone USG report shows normal USG report with maintained CM differentiation.

CONCLUSION: The treatment regimen of *Gokshura churna, Banga Bhasma, Punarnava shtakak* modification could possibly alleviated the symptoms and flushed out the small to medium size renal calculus. No any adverse reaction was observed during course of treatment, proving the formulation safe and effective. However large scale clinical studies would be more confirmatory. It is proposed that the therapy may be accepted as an effective, economic and non-invasive treatment method to treat renal calculus.



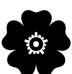
Date : 24/04/2017

USG ABDOMEN
LIVER Normal size and echotexture. No evidence of focal lesion. Intra hepatic billiary radicles are not dilated. Common bile duct and Portal vein appears normal.
GALL BLADDER Distended and appear normal, no evidence of gall stone.
PANCREAS Head & body part appears normal in size and echotexture. Tail region is obscured by bowel gas.
SPLEEN Normal size and echotexture.
KIDNEYS Both kidneys are normal in size and echotexture. LEFT KIDNEY SHOWS MODERATE HYDRONEPHROSIS WITH HYDROURETER UPTO A STONE OF SIZE 8.6 X 4.5 MM IN LOWER URETER, JUST PROXIMAL TO VUJ. No evidence of renal stone or hydronephrosis on right side. CM differentiation is preserved on right side.
URINARY BLADDER Partially distended.
PROSTATE Normal size with normal echotexture.
Bowel loops undervision reveal no abnormal distension. No free fluid in peritoneal cavity is seen.
RIF : No E/o. lump or abscess noted at present examination.
IMPRESSION :
* A LEFT LOWER URETERIC STONE CAUSING MODERATE HYDRONEPHROSIS & HYDROURETER.

USG ABDOMEN
LIVER Normal size and echotexture. No evidence of focal lesion. Intra hepatic billiary radicles are not dilated. Common bile duct and Portal vein appears normal.
GALL BLADDER IS TOTALLY COLLAPSED.
PANCREAS Head & body part appears normal in size and echotexture. Tail region is obscured by bowel gas.
SPLEEN Normal size and echotexture.
KIDNEYS
Both kidneys are normal in size and echotexture. No evidence of renal stone or hydronephrosis on either sides. CM differentiation is preserved on either sides.
URINARY BLADDER Partially distended.
BOTH VUJ & VISIBLE LOWER URETERS APPEAR NORMAL.
PROSTATE Normal size with normal echotexture.
Bowel loops undervision reveal no abnormal distension. No free fluid in peritoneal cavity is seen.
RIF : No E/o. lump or abscess noted at present examination.
IMPRESSION : No definite sonological abnormality is noted.

USG of KUB (BT)	USG of KUB (AT)

127. Komanga Sudarmi, Dudhamal TS. Monika Kumari. Ayurved management of Mootrashmari (ureteric calculus): a single case study. Indian Journal of Ancient Medicine and Yoga [IJAMY]. 2018;11(1): 29-32.[pISSN 0974-6986, eISSN 0974-6994). www.rfppl.com https://www.researchgate.net/publication/360588442_Ayurved_Management_of_Mootrashmari_Ureteric_Calculus_A_Single_Case_Study



Management of *Mutrashmari* (urolithiasis) with *Palasha Kshara* and *Ashmarihara Kwatha*: an open-labelled placebo-controlled clinical trial[128]

PURPOSE: To compare the efficacy of *Palasha Kshara* and *Ashmarihara Kwatha* with a placebo in the management of urolithiasis.

MATERIAL AND METHODS:

STUDY DESIGN: An open-labelled placebo-controlled clinical trial on diagnosed patients of *Mutrashmari*/urolithiasis.

DIAGNOSTIC CRITERIA: The diagnosis was made on the basis of clinical features like pain in the renal angle and loin region, radiating toward the groin, burning micturition, mild hematuria, with nausea and vomiting.

INCLUSION CRITERIA: Patients of age group from 18 to 70 years of either sex having renal and ureteric stones, with size up to 10 mm were included in this trial.

EXCLUSION CRITERIA: Patient having chronic renal failure, gross hydronephrosis (HN), acute abdominal pain, cases which requires surgical intervention, severe haematuria, & stone size more than 10 mm were excluded. Known cases of malignancy, tuberculosis, human immunodeficiency virus, venereal disease research laboratory, & hepatitis B-positive cases were also excluded from the study. Uncontrolled hypertension, diabetes mellitus, & cardiac disorders were also excluded. Urinary stone present in the urinary bladder and urethra were also excluded from this study.

LABORATORY INVESTIGATIONS: Routine haemogram, random blood sugar, liver function test, renal function test, urine analysis: routine and microscopic, and urine culture, ultrasound (whole abdomen and pelvis), and X-ray abdomen (if needed) were done before and after treatment in all patients.

GROUPING:
GROUP A ($n = 20$) patients were treated with 500 mg capsule of *Palasha Kshara* and *Ashmarihara Kwatha* (40 ml) thrice daily after meal for 60 days, along with that the patients were also advised to take *Pathya Ahara* (wholesome diet).

GROUP B ($n = 19$) patients were treated with 500 mg placebo (granulated wheat) capsule after the meal, and *Pathya Ahara* was given along with 3-4 litter of water over 24 hour.

RESULTS:
IN GROUP A: Total 37 kidney stones and four ureteric stones of different sizes were found in 20 cases. About 29.73% of stones were expelled out, 51.35% of stones decreased in size and no change was observed in 10.81% of stones, whereas increment in stone size was observed in 8.11% of stones. With reference to ureteric stone, 75% of stones were expelled out, and 25% of stones were decreased in size.

IN GROUP B (placebo): Total of 35 kidney stones and five ureteric stones of different sizes were found in 19 cases. Twenty percent of stones were expelled out, 37.14% of stones decreased in size and no change was observed in 5.71% of stones, whereas increase in stone size was observed in 37.14% of stones. In relation to ureteric stone, all stones increased in size, i.e., 100%.

CONCLUSION: *Palasha Kshara* and *Ashmarihara Kwatha* showed effectiveness in symptomatic management of *Mutrashmari* (urolithiasis), and also expelled the small size stones, i.e., <10 mm.

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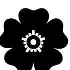
128. Kumari M, Tukaram D. Management of *Mutrashmari* (urolithiasis) with *Palasha Kshara* and *Ashmarihara* Kwatha: An open-labelled placebo-controlled clinical trial. AYU 2022;43:54-9. [ISSN: p-0974-8520 e-0976-9382] DOI: 10.4103/ayu.AYU_225_19 www.ayujournal.org
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10468020/



Agnikarma with adjuvant drug in the management of frozen shoulder (Avabahuka)-a case report[129]

CASE DESCRIPTION: A 50-year-old housewife had complaints of painful restricted movement of the right shoulder radiating to the right elbow joint since last 1 year. Initially it was intermittent type of dull ache, and later on it gradually increased specially during nighttime, sleeping on same side or in cold weather. Previously, she was advised for physiotherapy and oral analgesic (tab. aceclofenac 100 mg + paracetamol 500 mg) twice a day after meal for 15 days.

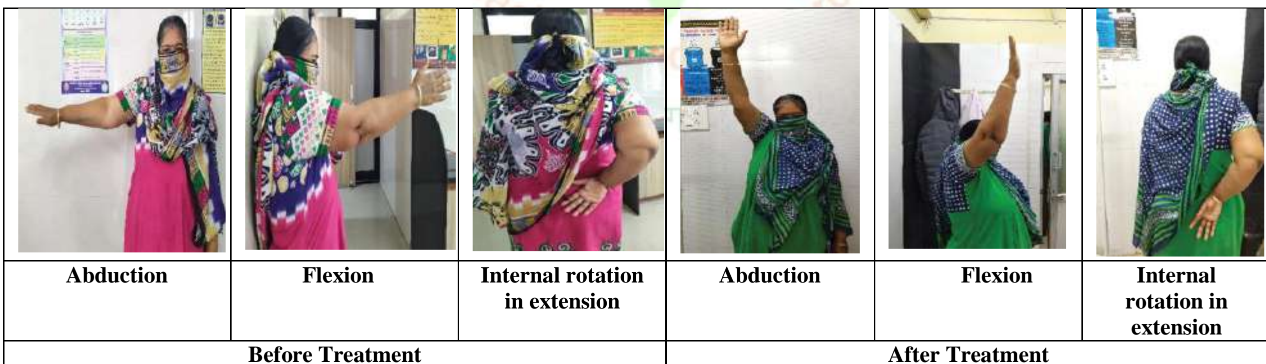
ON EXAMINATION: There was Grade II tenderness in the right shoulder joint, restricted abduction, flexion, internal rotation with normal muscle power, and muscle tone without shoulder muscle wasting. Apley's scratch test was found positive. Sensory perceptions of superficial stimuli (soft touch), deep stimuli (pain sensation), and temperature were found normal.

INVESTIGATION: Radiological investigations of the right shoulder joint revealed normal study, and the patient was diagnosed as a case of Stage II frozen shoulder according to Reeves.

THERAPEUTIC INTERVENTION: After antiseptic painting of local part (right shoulder) with povidone iodine solution and dry gauze piece, 10–12 *Bindu Vishesha Dahana* were produced by red hot *Pancha Dhatu Shalaka* in most tender part of the right shoulder joint followed by immediate application of *Kumari Majja* and *Haridra Churna*. The patient was prescribed to take 50 ml of *Dashmooladi Kwatha* orally at evening time empty stomach for 30 days. *Haritaki Churna* was prescribed in dose of 3 gm powder at morning time empty stomach with *Guda* (jaggary) for 30 days.

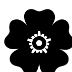
RESULT: After 4 sitting of *Agnikarma*, VAS score was 0, complete pain less abduction and flexion movement were achieved except internal rotation after the 28th day of treatment.

CONCLUSION: This single case report demonstrates effectiveness of the Ayurveda treatment protocol to manage *Avabahuka* (frozen shoulder).



Abduction	Flexion	Internal rotation in extension	Abduction	Flexion	Internal rotation in extension
Before Treatment			After Treatment		

129. Kapadiya M, Joshi F, Dudhamal TS. Agnikarma with Adjuvant Drug in the Management of Frozen Shoulder (Avabahuka) – A Case Report. Asian Pac. J. Health Sci., 2021;8(4):75-78. [e-ISSN: 2349-0659 p-ISSN; 2350-0964] www.apjhs.com https://www.researchgate.net/publication/355369882_Agnikarma_with_Adjuvant_Drug_in_the_Management_of_Frozen_Shoulder_Avabahuka_-A_Case_Report



Raktamokshana (wet cupping therapy) in the management of calcified supraspinatus tendinitis presenting as frozen shoulder: a rare case report[130]

CASE DESCRIPTION: A 54-year-old male patient had complaints of painful right shoulder joint and pain radiating up to the right elbow joint for the last one year, while there is restricted movement of the right shoulder joint for last 6 months. It started gradually as a throbbing type of continuous pain, and increased during the night that disturbed the sleep. The patient is a laundry worker for the last 14 years, and doing daily work with 10-kg heavy iron. The patient had no history of diabetes or hypertension. The patient had three intra-articular Gemcort injections in 15-day interval by an orthopedic surgeon, but got relief for limited days.

ON EXAMINATION: The patient had swelling at the right shoulder & Grade II tenderness at the glenohumeral joint. The patient had forward flexion of 40°, abduction of 40°, and extension of 10°, while internal rotation & external rotation were found to be within normal limits. Cuff strength was intact clinically and to assess impingement was difficult.

INVESTIGATION: In the X-ray of right shoulder joint (anteroposterior view) there were calcific deposits in the region of the supraspinatus tendon. Approximately, the size of calcification was 1.5 cm, and according to Gartner and Heyer classification, it was type I.

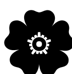
THERAPEUTIC INTERVENTION: The patient was managed with two sittings of WCT.

RESULT: Complete pain relief (VAS 0), and also complete dissolve of calcified deposits in the region of the supraspinatus tendon was observed after 2nd sitting of cupping.

Abduction	Flexion	Range Of Movement	Abduction	Flexion	Range Of Movement
Before Treatment			**After Treatment**		

130. Kapadiya M, Jain V, Dudhamal TS. Raktamokshan (Cupping therapy) in the management of calcified supraspinatus tendinitis presenting as frozen shoulder: a rare case report. BLDE University Journal of Health Science. 2021; 7(1): 158-162. www.bldeujournalhs.in

https://www.researchgate.net/publication/361556342_Raktamokshana_wet_cupping_therapy_in_the_management_of_calcified_supraspinatus_tendinitis_presenting_as_frozen_shoulder_A_rare_case_report



Management of *Avabahuk* (stage 1 primary frozen shoulder) through Wet cupping therapy: a single case report[131]

CASE DESCRIPTION: A 51 years old female home maker with type 2 diabetes since last 5 years had complaint of right dominating shoulder pain with stiffness since 4 months. There were actively restricted shoulder joint movements since last 4 months. Pain was dull ache type radiating from shoulder to deltoid region, and increased especially at night time if slept on the affected side or after sour food consumption and strenuous activity. No medical or trauma history related to shoulder joint was found. Patient was taking medicines for glycemic control: Metformin 500 mg and Glimepiride 1mg.

ON EXAMINATION: The patient had swelling at the right shoulder, and grade 2 tenderness at the glenohumeral joint. The patient could attain all the movement with pain except internal rotation in extension. Internal rotation was found up to L5 level. Visual Analog scale was 5.

INVESTIGATION: All routine blood investigation were done for screening purpose only, and found within normal limits (FBS was 129 mg/dl and PPBS was 221 mg/dl).

The X-ray of right shoulder joint (anteroposterior view alone) was done, and it was found to be normal.

THERAPEUTIC INTERVENTION: 3 sittings of wet cupping therapy followed by *Haridra churna* local application was given to patient.

Cupping procedure: The patient was advised to take *Yavagu* one hour before the procedure. Informed written consent was taken before procedure, and vitals were checked. Local *Abhyanga* (massage) with *Bala taila* and *Dashmool Kwatha Nadi Swedana* was done at the right shoulder joint. In sitting position, four modified *Shringa Yantra* (Chinese cup) were applied on the most tender point at the right shoulder and a negative pressure was created by suction and maintained for 3-4 min, and then the cups were removed. Approximately 0.5 cm deep needling was done with a 24G needle on the demarcated area of cups. Then again, cups were reapplied on the needle-marked area and negative pressure was created by suction. After terminations of bleeding, cups were removed, and the site was cleaned with povidone-iodine solution followed by *Haridra* (Curcuma longa L.) powder dusting. The patient was advised to avoid water contact at least for 24 h. The same procedure was repeated after 7 days of interval.

RESULT: After 3 sittings of wet cupping therapy, Visual Analog scale was 0 and ROM reached up to Level 1 only.

CONCLUSION: Pain dominant primary frozen shoulder can be successfully treated with cupping therapy.

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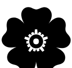
131. Kapadiya M, Dudhamal TS. Management of Avabahuka (stage 1 primary frozen shoulder) through wet cupping therapy: A single case report. The Healer Journal 2022 3(1): 72-75. [e ISSN : 2738-9634 p-ISSN: 2738-9863]. www.thehealerjournal.org

https://www.researchgate.net/publication/361187144_Management_of_Avabahuka_stage_I_primary_frozen_shoulder_through_Wet_cupping_therapy_A_single_case_report



Management of frozen shoulder with Agnikarma[132]

CASE DESCRIPTION: A 50 year old housewife had complaint of severe pain in left shoulder for 3 months with unbearable pain at night, and difficulty in doing chores & lifting hand for 1½ months. The patient gradually felt dull aching pain over her left shoulder since last 3 months, and gradual restriction of movement in left shoulder from last 1½ months. She took some pain killers without any relief. The symptoms used to get aggravated during doing home chores and at night-time. She was a known case of hypothyroidism and was on tablet thyronorm (50 mg) once a day. There was no past surgical history.

ON EXAMINATION: Blood routine, blood glucose levels, urine routine/micro levels were within normal range, & serological investigations like HIV and HBsAg were negative, with normal findings of x-ray of left shoulder (AP view). In left shoulder to exclude the possibility of rotator cuff tear, rotator cuff impingement, & glenohumeral joint arthritis: drop arm test, press belly test, horn blower tests and impingement test were carried out and were found to be negative with positive Appley's scratch test for frozen shoulder. X-ray of left shoulder AP view showed no abnormal findings.

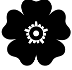
THERAPEUTIC INTERVENTION: The patient was treated with 3 sittings of *Agnikarma* i.e., 1st sitting and 2nd sitting on 8th day and 3rd sitting on 15th day with follow up after 30 days.

RESULT: (Follow up):

Parameters		BT	AT			Follow up (After)
			1st week	2nd week	3rd week	6th week
Pain (VAS)		VAS 8	VAS 6	VAS 4	VAS 3	VAS 1
Stiffness		3	3	2	2	1
ROM	Abduction	90	100	120	150	160
	Adduction	90	110	140	140	150
	Flexion	100	120	120	160	165
	Extension	40	40	40	50	60
	Internal rotation	60	60	60	60	70
	External rotation	70	80	80	90	100

CONCLUSION: *Avbahuka* or frozen shoulder can be successfully managed with *Agnikarma* after proper assessment of the disease. *Agnikarma* procedure is economical and simple and can be performed at OPD level without necessarity of hospitalization. If performed under skilled guidance it gives best results in terms of pain management. Hence, this modality was executed successfully in this case & can be used in similar cases of *Avabahuka.* However, as this is a single case study, further studies can be conducted to establish a definitive protocol for the management of *Avabahuka*.

132. Komal Dhalani, Dudhamal TS. Management of frozen shoulder with Agnikarma. Journal of Emerging Technologies and Innovative Research 2022;9(11):432-437 [eISSN-2349-5162] www.jetir.org https://www.jetir.org/view?paper=JETIR2211246



Clinical evaluation of Siravyadha in the Management of *Gridhrasi*[133]

PURPOSE: To evaluate the effect of *Raktamokshana* by *Siravyadha* in the management of *Gridhrasi* as well as to find out the non-pharmacological treatment for *Gridhrasi*.

MATERIAL AND METHODS:

STUDY DESIGN: In this randomised clinical trial 60 patients suffering from *Gridhrasi* were selected and randomly allocated into trial and control groups.

DIAGNOSTIC CRITERIA: Patients suffering from classical sign & symptoms of *Gridhrasi* were included with positive SLR test.

INCLUSION CRITERIA: Patients aged between 25-60 years with the presenting complaints and features of *Gridhrasi* irrespective of sex, religion, education & socio-economic status were included.

EXCLUSION CRITERIA: Age below 25 & above 60 years. Contraindicated conditions for Raktamokshana. Patients suffering from diseases like Diabetes mellitus, Tuberculosis, Leprosy, Anaemia, Cardiac insufficiency, Jaundice, Prolapsed disc, Spinal Cord injury, Fracture of spine etc. were excluded.

GROUPING AND TREATMENT:

Group A: Raktamokshana was done two times at one week interval and a maximum of 100 ml. blood was drained out

Group B: *Abhyanga* and *Svedana* were done daily for 15 days.

FOLLOW UP: 2 months for both the group.

METHODS OF RAKTAMOKSHANA: Patient was laid down on the examination table in supine position. Cuff of BP apparatus was used as tourniquet in the affected leg to make the veins prominent and engorged. *Siravyadha* was done with the help of 20 no. scalp vein set from the calf region of affected leg at 4 *Angula* below the *Janusandhi*. A maximum of 100 ml of blood was drained out. Continuous observation was made for any signs of *Marmaghata*/shock or adverse effect.

RESULT: Relief in the leg pain was observed in 50% of patients of trial group where as in control group it was only 10%. Relief in the tingling sensation was observed in 73.90% of patients of trial group and in control group it was in 47% of patients. It suggested that *Raktamokshana* by *Siravyadha* had better result as compared to *Svedan* and *Abhyanga*.

In the cases with loss of sensation, the relief was found in 50% of patients in trial group where as in control group there was no change. The pain in lumber vertebral region was relieved in all the patients of trial group (i.e. 100% relief), whereas control group showed relief in only 12.50% of the cases.

CONCLUSION: The patients suffering from *Gridhrasi* with *Anubandha* of *Kapha*, Pitta or *Rakta* as a *Dushya* got complete relief, whereas cases with pure *Vataj Gridhrasi* in some symptoms showed remarkable remission but none of the cases were completely cured. In the trial group 17 out of 30 patients had got complete remission in the tingling sensation and lumbar pain, which was the main symptom of *Gridhrasi*. Henceforth, it may be assumed that *Raktamokshana* by *Siravyadha* is the one of the best treatment approach for the patients of *Gridhrasi*.

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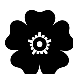
133. Dudhamal Tukaram Sambhaji, Gupta Sanjay Kumar, Chaturbhuja Bhuyan. Clinical evaluation of Siravyadha in the Management of Gridhrasi. Indian Journal of Ancient Medicine and Yoga Volume 3 Number 2, April-June 2010.
https://www.researchgate.net/publication/297549854_Clinical_evaluation_of_Siravyadha_in_the_Management_of_Gridhrasi



A comparative clinical study of Siravedha and Agnikarma in management of Gridhrasi (Sciatica)[134]

PURPOSE: To compare the efficacy of *Siravedha* and *Agnikarma* in management of *Gridhrasi*.

MATERIALS AND METHODS:

STUDY DESIGN: An open labelled randomized parallel group trial of 38 patients suffering from *Gridhrasi* enrolled randomly irrespective of their age, sex, religion, caste, occupation etc.
INCLUSION CRITERIA: Diagnosed cases of *Gridhrasi* in b/w age group 25-65yrs with symptoms like *Ruja, Stambha, Suptata, Spandana, Tandra, Gaurav, Arochaka* and signs like *Sakthi Nikshepa Nigraha* (i.e., straight leg rising-SLR test positive) were included.
EXCLUSION CRITERIA: Uncontrolled diabetes mellitus, hypertension, tuberculosis of spine and hip joint, malignancy of spine or other organs and fracture related to spine were excluded. Pregnancy and other systemic diseases like cardiac disorders (ischemic heart disease, coronary artery disease, myocardial infarction etc.) and anaemia (hemoglobin % <07.00 mg/dl) were also excluded.

GROUPING:
GROUP A (n=19): *Bindu* type of *Dahana* was done with *Panchdhatu Shalaka*. Total of 5-30 *Bindu Dahan* at lumbo sacral region, and 5-15 *Bindu Dahan* at Achilles tendon region of ankle were made. After *Agnikarma*, *Haridra* powder was sprinkled on wounds & patient was advised to apply *Madhu* and *Ghrita* from the next day. The same procedure was adopted at 7 days interval for 4 times.
GROUP B (n=11): *Siravedha* type of *Raktamokshana* with the help of disposable scalp vein no. 20 was done under all aseptic conditions. A total volume of 30-60 ml bloodletting according to condition and severity of disease was done from 4 *Angula* below *Janu Sandhi* (Knee joint). Tight bandage was done after the procedure. The similar procedure was adopted at 7 days interval for 4 times.

RESULTS:

Group A: Highly significant results were seen in cases of *Ruja* (64.91%), *Stambha* (75.42%), *Suptata* (65.38%), *Spandana* (pulsatile feeling-42.85%), *Tandra* (drowsiness-50%), *Gaurava* (66.68%) and *Sakthinikshepanigraha* (restricted movement of thigh-66.09%). *Agnikarma* had provided highly significant results in increasing muscle power of hip flexion (75.02%), ankle dorsiflexion (100%) and great toe extension (75.02%).

Group B: Highly significant results were seen in cases of *Ruka* (33.32%), *Stambha* (45.82%), *Suptata* (58.62%), *Gaurava* (57.15%) and *Sakthinikshepanigraha* (46.14%), whereas insignificant results were seen in *Spandana* and *Tandra* cases. *Siravedha* had no significant effect on muscle power.

CONCLUSION: *Agnikarma* and *Siravedha* are simple, cheap, safe and effective management procedures for *Gridhrasi,* but *Agnikarma* is more effective than *Siravedha* in relieving the main symptoms of the disease.

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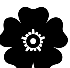
134. Vaneet KJ, Dudhamal TS, Gupta SK, Mahanta VD; A comparative clinical study of Siravedha and Agnikarma in management of Gridhrasi (sciatica); AYU | Jul-Sep 2014 | Vol 35 | Issue 3 DOI: 10.4103/0974-8520.153743 www.ayujournal.org

https://www.researchgate.net/publication/276911752_A_comparative_clinical_study_of_Siravedha_and_Agnikarma_in_management_of_Gridhrasi_sciatica



Effect of Cupping Therapy in Gridhrasi (Sciatica)[135]

CASE DESCRIPTION: A 44 year old female patient had complaints of low back pain radiating to left leg, severe morning stiffness, burning sensation in left foot, and reduced appetite since last 7 years. Patient was non-hypertensive, non-diabetic and did not have any symptoms of endocrinal disorders and no operative history or history of any other systemic disease. Patient reported history of taking allopathic medicine which provided temporary pain relief. Hence, she consulted IPGT&RA, Ayurved Research Hospital. Patient was diagnosed mainly on the basis of signs and symptoms as mentioned in the texts of Ayurveda and modern medical signs like *Ruka*, *Toda, Stambha, Spandana,* & *Sakthanakshepananigrahaniyat.*

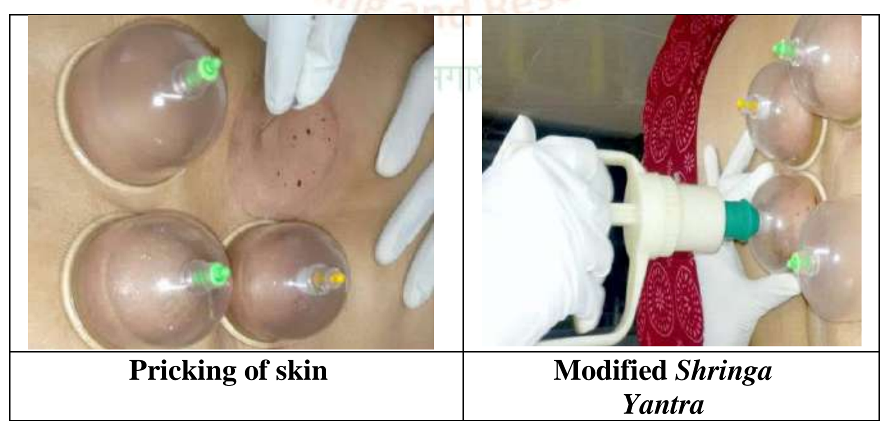
ON EXAMINATION: Patient had *Vata-Kaphaja* dominated *Prakriti*. On examination there was restricted movement of leg and painful forward bending. Straight leg raising (S.L.R.) test /Lasegue sign was noted and was found to be 35° in the left leg.

INVESTIGATION: The laboratory investigation for blood was done before and after the treatment, and was found within normal limits. Special investigations for HIV, HBsAg was done. X-Ray of lumbosacral spine, AP and Lateral view, was done before and after treatment and no deformity was noted.

THERAPEUTIC INTERVENTION: Cupping therapy (total 2 sittings) was done with all aseptic precaution. Dusting of turmeric powder was done after the each procedure. Water mixed with honey was given for oral intake. Follow up was done after 15 days. Patient was advised to avoid water contact to pricking area for 24 hours.

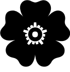
RESULT: After 1st sitting, patient got 50 % relief in *Ruka, Toda, Stambha, Sakthan Akshepana Nigrahaniyat.* S.L.R was increased up to 50°. After 2nd sitting, she got 90% relief in aforesaid symptoms & S.L.R. rose to 70°. She had no pain during walking & less burning sensation in foot. She can bend forward, and was able to perform her daily routine work without pain and comfortably.

CONCLUSION: *Raktmokshana* by cupping therapy is one of the para surgical options for management of *Gridhrasi*. Further studies are needed in more patients for its scientific validation.



Pricking of skin	**Modified *Shringa Yantra***

135. Durgesh Nandini, Dudhamal TS. Effect of Cupping Therapy in Gridhrasi (Sciatica)-A case report. Indian Journal of Ancient Medicine and Yoga. 2016;9 (3): 115-118. [ISSN: p-0974-6986, e-0974- 6994]. www.rfppl.com.
https://www.researchgate.net/publication/308902540_Case_Report_Effect_of_Cupping_Therapy_in_Gridhrasi_Sciatica



A comparative clinical evaluation of Agnikarma and Raktamokshana in management of Gridhrasi (sciatica)[136]

PURPOSE: To compare the efficacy of *Agnikarma* & *Raktamokshana* in the management of sciatica.

MATERIALS AND METHODS:

STUDY DESIGN: An open labelled randomized clinical trial on 29 patients of *Gridhrasi* (Sciatica).

DIAGNOSIS CRITERIA: Patients were diagnosed on the basis of classical signs and symptoms of *Gridhrasi* like pain radiating from *Sphika* to *Pada* region, *Stambha, Suptata* (numbness) and *Gaurav*.

INCLUSION CRITERIA: Diagnosed cases of *Gridhrasi* (sciatica), with age group in b/w 25- 65 years of either sex & positive Straight leg rising (SLR) test were included.

EXCLUSION CRITERIA: Uncontrolled cases of hypertension, diabetes mellitus; tuberculosis of spine & hip joint, malignancy & fracture related to spine; patients of anaemia having (Hb% < 7 mg/dl) & pregnancy were excluded.

INVESTIGATIONS: Routine investigation like CBC, ESR, Serum calcium & Serum uric acid were done for this study. Radiological examination: X-ray Lumbo-Sacral spine (antero-posterior & lateral view) was carried out before and after completion of the whole treatment course.

GROUPING

GROUP A (n=15): Agnikarma was done with *Panchdhatu Shalaka* at painful/tender area of lumbo-sacral region and four *Angulas* above ankle joint in Achilles tendon at weekly interval for one month in 4 sittings. 0.5 cm–1cm gap was left b/w two points of *Dagdha*. Immediately *Ghrit Kumari Majja* was applied to relieve burning sensation & dusting of *Haridra* powder after Agnikarma on the *Dagdha Vrana* was done.

GROUP –B (n=14): *Raktamokshana* was done with *Shringa Yantra* at painful/tender area of lumbo sacral region and four *Angula* above *Janu Sandhi* in 15 days interval for one month in 2 sittings after local *Snehan* with *Tila Taila* and *Nadi Swedena* with *Dashmool Kwath*. Modified *Shringa Yantras* were applied to demarcate the site. After visible change in color all the MSYs were removed. 20-25 pricks in skin were made by using disposable needle no.24 after that re-application of modified *Shringa Yantra* was done on the pricking site. Cups were kept at the site till complete cessation of oozing of the blood. In one sitting minimum 30ml and maximum 50 ml blood was removed and on an average 40 ml blood was removed. Dusting of *Haridra* powder was done after *Raktamokshana* on the pricked area.

RESULT in GROUP A: There was complete remission of disease in 04 (26.67%) patient, 03 (20%) patients got marked improvement, 06 (40%) patient got moderate improvement, 01 (6.67%) patient got mild improvement and 01 (6.67%) patient remain unchanged after *Agnikarma*.

RESULT in GROUP B: 06 (42.85%) patients got marked improvement, 07 (50%) patients got moderate improvement, 01 (7.14%) patient got mild improvement. No patients got complete remission or remain unchanged after *Raktamokshana* treatment.

CONCLUSION: Both parasurgical modalities have definite role in relieving pain. But *Agnikarma* has shown better result in compare to *Raktamokshana* in the management of *Gridhrasi* (Sciatica).

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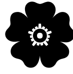
136. Nandini D, Dudhamal TS, A Comparative Clinical Evaluation of Agnikarma and Raktamokshana in Management of Gridhrasi (Sciatica), The Healer Journal, 2021;2(1):1-7. [e ISSN : 2738-9634 p-ISSN: 2738-9863] www.thehealerjournal.org
https://www.researchgate.net/publication/349984740_A_Comparative_Clinical_Evaluation_of_Agnikarma_and_Raktamokshana_in_Management_of_Gridhrasi_Sciatica



Clinical efficacy of Raktamokshana by cupping method in the management of chronic cervical spondylitis: a case study[137]

CASE DESCRIPTION: A 47-year-old male patient had complaints of pain over the neck region since 4 years, radiating to both upper limbs, tingling sensation up to the tip of fingers, and difficulty in neck movement due to muscle stiffness. The patient was a laborer by profession & has to do a lot of weight lifting. There was no relevant medical, family or surgical history reported by the patient. General condition was moderate, and his appetite was slightly decreased with regular bowel habit and micturition. Sleep was disturbed due to pain at night.

ON EXAMINATION: No systemic deformity was found. All vitals were stable. Active ranges of motion (ROM) were painful. On cervical compression, the pain increased, which radiated towards the patient's arms (Spurling's test positive). During flexion of neck, the patient felt electric shock toward arms (Lhermitte's sign). The patient was of *Vata–Kapha* body constitution with the predominance of *Vata Dosha*, involving *Asthi* and *Majja* as a *Dushya*.

INVESTIGATION: X-ray cervical spine showed osteophyte formation with normal intervertebral disc. Routine blood investigations were within normal limits.

THERAPEUTIC INTERVENTION: Two sittings of *Raktamokshana* by fiber cups were performed on OPD basis at 15-day interval on June 21, 2019, and July 5, 2019.

RESULT:

Assessment criteria	BT	After 15 days	AT (after 30 days)	Result (%) (after Rx)
VAS score	7	4	2	71.42
Cervical stiffness	3	2	1	66.66
Tingling sensation in hand	3	2	1	66.66
NDI	67.5%	45.5%	12.5%	81.48
Forward flexion	40°	60°	65°	62.5
Backward extension	35°	40°	45°	28.57
Left lateral flexion	30°	45°	45°	50
Right lateral flexion	30°	45°	45°	50
Rotation toward right	70°	80°	80°	14.28
Rotation toward left	70°	80°	80°	14.28

CONCLUSION: *Raktamokshana* by cupping can be effectively used in cervical spondylosis. With this treatment, patients can avoid the use of analgesic medicines, which cause harmful side effects, and can improve their quality of life. This single-case study showed encouraging results and needs further evaluation in a larger samples of patients.

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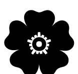
137. Patel ED, Tukaram DS. Clinical efficacy of Raktamokshana by cupping method in the management of chronic cervical spondylosis: A case study. J Indian System of Medicine 2020;8:137-40. [ISSN: p-2320-4419 e-2455-5029]. www.joinsysmed.com
https://www.researchgate.net/publication/344642938_Clinical_efficacy_of_Raktamokshana_by_cupping_method_in_the_management_of_chronic_cervical_spondylosis_A_case_study



<u>Marma Chikitsa to manage *Griva Sandhigata Vata* w.s.r. to cervical spondylosis-a case study</u>[138]

<u>CASE DESCRIPTION:</u> A 60 year old business woman with a well-built physique (Wt. 70kg) & height of 165 cm had complaint of pain and stiffness in cervical region for one year, and pain radiating to right upper limb for six months. Occasionally during the night and early morning she had felt tingling and numbness in both hands. She had headache once a week and sometimes felt vertigo. Two months back she had suffered from painful neck movement. She had been diagnosed as a case of cervical spondylosis & had consulted neurological & orthopedic doctors in Jamnagar who advised her for surgical intervention, which the patient refused. She was advised to take analgesics and anti-inflammatory medications for pain management by a previous consultant. She had a total abdominal hysterectomy in 1990 and had carpal tunnel syndrome in both hands in 2010-11.

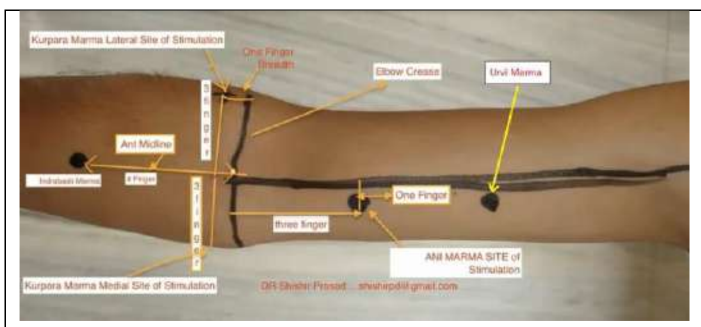
<u>ON EXAMINATION:</u> The active movement of the range of the cervical spine was restricted, & pain was aggravated on the movement of the neck. On palpation, tenderness was found over C3, C4, C5, C6, and C7 vertebras. All cranial nerves were intact.

<u>ON INVESTIGATION:</u> X-ray of cervical spine suggested grade-1 anterolisthesis of C3 over C4 vertebra; changes of cervical spondylosis in form of reduced intervertebral disc spaces, anterior and posterior osteophyte from C4 to C7 level.

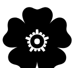
<u>THERAPEUTIC INTERVENTION:</u> *Marma* therapy was done. Each *Marma* was stimulated for 20-25 times in one sitting per day and pressure applied should be optimal with contact time of one cardiac cycle (i.e., 0.8 seconds) for two weeks in empty stomach in the morning. The rhythm of stimulation is same as the rhythm of our respiration i.e. approx. 20 times per minute.

<u>RESULT:</u> After fourteen days of treatment, painless (VAS-0) normal flexion, extension, lateral flexion was achieved except rotation towards left; no tingling and numbness was seen.

<u>CONCLUSION:</u> *Marma* therapy was found to have immediate effect in pain and stiffness and good long-term effect in normalizing pain, resulted in total reduction of pain as well as stiffness over the affected area to good extent. Also, the patient was able to carry on with her day to day work and lifestyle with precautions advised. Thus, elaborated studies are required to analyze the effect of *Marma* therapy in cervical spondylosis.



138. Hiren Mistry, Dudhamal TS. An historical review on literature of Marma Science-An ancient healing technique. Asian Pac. J. Health Sci., 2022;9(4):1-5. [e-ISSN: 2349-0659 p-ISSN; 2350-0964] www.apjhs.com https://www.researchgate.net/publication/369742798_A_Historical_Review_on_Literature_of_Marma_Science_-_An_Ancient_Healing_Technique



Integrative Ayurveda approach to manage degenerative cervical myelopathy (DCM)-a case report[139]

CASE DESCRIPTION: A 39 year old male labourer, had complaints of neck pain, neck stiffness, tingling sensation in upper limbs while heaviness and weakness in both upper and lower limbs for the last 4 months (especially tingling sensation in the upper limb during extension of the neck). He also had complaints about subtle changes in gait and balance. He was unable to hold body posture for more than five minutes, with a loss of manual dexterity, and difficulty in writing since 26/04/2021. The patient had an alleged history of approximately 5 kg of weight falling on the head in the flexed position of the neck from the height of about 15-20 feet on 20/02/2021. After the injury patient fell on the floor, and was unable to hold the standing posture for 5 minutes due to loss of sensation in the upper and lower limbs.

ON EXAMINATION: On local examination of cervical region, there was painful motion of neck during extension and flexion while all other movements remained normal. During cervical compression, neck pain increased and radiated towards arms (Spurling's test positive). During extension of neck, patient felt electric shock like sensation towards arms (Lhermitte's sign positive).

On neurological examination, higher mental function and speech were normal. On motor examination, bulk, tone of bilateral arms and legs were normal. Power on both upper and lower limbs was grade 4 as per Medical Research Council Score. Superficial and deep tendon reflexes of both the upper and lower extremities were normal. Patient was exhibiting ataxic gait, & could not walk or maintain balance for more than 5 minutes. Patient had loss of manual dexterity & had difficulty in writing.

INVESTIGATIONS: MRI cervical spine demonstrate posterior disc herniation at C3-C4 with thickening of posterior longitudinal ligament and ligamentum flavum resulting into spinal canal stenosis (antero-posterior diameter 5.5 mm) causing compression on cord with subtle signal changes. Posterior disc bulging at C4-C5 level causing mild compression on ventral nerve roots and cord without signal changes. Posterior and left paracentral disc herniation at C5-C6 level causing compression on left exiting nerve root and mild compression on cord without signal changes. Vertebral bodies showed spondylotic changes. Brain appeared unremarkable. All laboratory and biochemical investigations were noted and found to be within normal limit.

THERAPEUTIC INTERVENTION: Four sittings of *Agnikarma* were done at the neck region on one week interval to manage pain. After those two sittings of wet cupping was done at fifteen days interval. *Rasnasaptak Kwath* 10ml and *Erandmula Kwath* 10ml on empty stomach twice a day, *Navajivana Rasa* 125 mg after meal with luke warm water twice a day, *Ashwagandha Arishta* 20ml with water two times a day after meal, *Karpasathyadi Taila* 5ml with 20 ml luke warm cow milk at morning empty stomach for three months was given orally and *Prasarini Taila* was given for local application once a day.

RESULT: Neck pain and stiffness subsided after *Agnikarma*. Tingling sensation and heaviness are considerably reduced after wet cupping therapy. Spurling's test and Hermitte's sign became negative bilaterally. The patient was able to walk with a normal gait without any time limit or support. The patient substantially enhanced in manual dexterity and writing. The power of upper and lower extremities was 5/5 according to the Medical Research Council Scale. Modified Japanese Orthopaedic Association Score [10] for cervical myelopathy before treatment was 4 and improved to 10.

CONCLUSION: A single case report exhibits that DCM can be managed by para-surgical procedures and adjuvant Ayurved medicines as a possible alternative to surgery with clinical and mild radiological evidence.

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139. Vj, Mk, Dudhamal TS. Integrative Ayurveda approach to manage Degenerative Cervical Myelopathy (DCM)-A Case Report. AAM. 2022; 11(4): 387-393. doi:10.5455/AAM.126577

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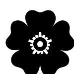


Clinical effect of Kshara Karma in the management of Nadivrana with special reference to Pilonidal Sinus (PNS) and review of literature[140]

Purpose: To evaluate the efficacy of *Kshara Karma* in pilonidal sinus.

Material and Methods:

Study Design: An open labelled clinical trial on 17 patients of pilonidal sinus.

Selection Criteria: Patient having signs and symptoms of pilonidal sinus with evidence of sinus in sinograph.

Grouping & Treatment

In group A (n=10) total excision of sinus tract followed by local application of *Apamarga Kshara Plota* (swab).

In group-B (n=07) partial excision /erudition of tract and then application *Apamarga Ksharasutra*.

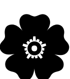
The procedure has been conducted with spinal anaesthesia for 10 cases, while local anaesthesia was used in 07 patients. Arogya Rasayan tablet of 250 mg three times a day was used as an adjuvant Ayurvedic medicine in 15 patients of both groups post-operatively for a period of six weeks. But in 2 complicated cases it was continued for another 3 weeks.

Results: The duration of treatment in group-A had taken 2 weeks, and for 05 patients in group-B it had taken 4 weeks. While in the two complicated cases of group-B (deep and long sinus cases), it took 9 weeks for complete remission.

Conclusion: Under PCA therapy, integration type of treatment had shown better result, and in maximum follow up cases it had been observed that the reoccurrence rate was quite negligible. As it was a pilot clinical study further evaluation of the study in large samples is recommended to establish this therapy as a treatment modality for pilonidal sinus.

Recurrent PNS	After Excision	After Healed

140. Bhuyan C, Dudhamal TS. Clinical Effect of Kshara Karma in the Management of Nadivrana with Special Reference to Pilonidal Sinus (PNS) and Review of Literature. IJAMY (Indian Journal of Ancient Medicine and Yoga 2017;10(1):13-18. (pISSN 0974- 6986, eISSN 0974 – 6994). www.rfppl.com.
https://www.researchgate.net/publication/318969527_Clinical_Effect_of_Kshara_Karma_in_the_Management_of_Nadivrana_with_Special_Reference_to_Pilonidal_Sinus_PNS_and_Review_of_Literature



Pilonidal sinus treated with Chedana and Ksharkarma: a case study[141]

CASE DESCRIPTION: A 21 year old male college student had complaints of watery discharge from an external opening seen at mid part of inter gluteal region since last 3 year with occasional manifestation of mild pain, discomfort and itching at natal cleft and low back region. Three years back patient had a history of boil at peri anal region. He took antibiotics and anti-inflammatory medicines for 7days and got relief from symptoms. Boil was present on & off during last 3years. TRUS was done to confirm the diagnosis.

INVESTIGATION: TRUS: there was 40mm long thick walled (3.6mm) pilonidal sinus with external opening in mid part of the inter gluteal cleft. The sinus is 3 to 5mm deep to skin. Routine blood and urine examinations were done, and found to be within normal range.

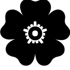
THERAPEUTIC INTERVENTION: Under local anesthesia with all aseptic condition, reassessment of extension was done by probing, and after that dye was inserted in PNS after widening of external opening. Elliptical incision was made around PNS and whole track was excised by 15 no. surgical blade. After that *Apamarga Tikshna Kshara* was applied & just within 30-40 second the wound surface become cauterized and turned blackish. The wound is irrigated with distilled water to remove the additional *Kshara*, which prevents further damage of the tissues. After proper hemostasis was achieved, dressing was done, and patient was shifted in ward with normal vital data.

RESULT: The wound was assessed weekly, and it was observed that in first week pain was reduced completely, and patient could do his daily work (there was mild serous discharge from the postoperative wound). On second week healthy granulation was observed without any discharge. On 4th week, wound was healthy and contracted. The wound healed completely within one and half month with minimal scar.

CONCLUSION: Excision & *Kshara Karma* in pilonidal sinus is one of the potential treatment options to avoid recurrence.

Pre-operative	*Tikshna apamarg kshara* applied	Post op wound	Healed tract after treatment

141. Patel PR., Dudhamal TS. Pilonidal Sinus Treated With Chedana and Ksharkarma: A Case Study. Int. J AYUSH CaRe. 2019; 3(1): 42-49. [ISSN: e-2457-0443]. www.ijacare.in
https://www.ijacare.in/index.php/ijacare/article/view/68



Management of pilonidal sinus by Ayurvedic treatment modalities[142]

CASE DESCRIPTION: A 22 year old male rickshaw driver had complaint of painful swelling in lower back region for 4 months. He also had recurrent boil with blood mixed pus discharge since 4 months. Patient had no relevant disease history before 6 months. After the patient developed severe pain during sleeping and continuous sitting postures, he came to notice the presence of the swelling & recurrent boils.

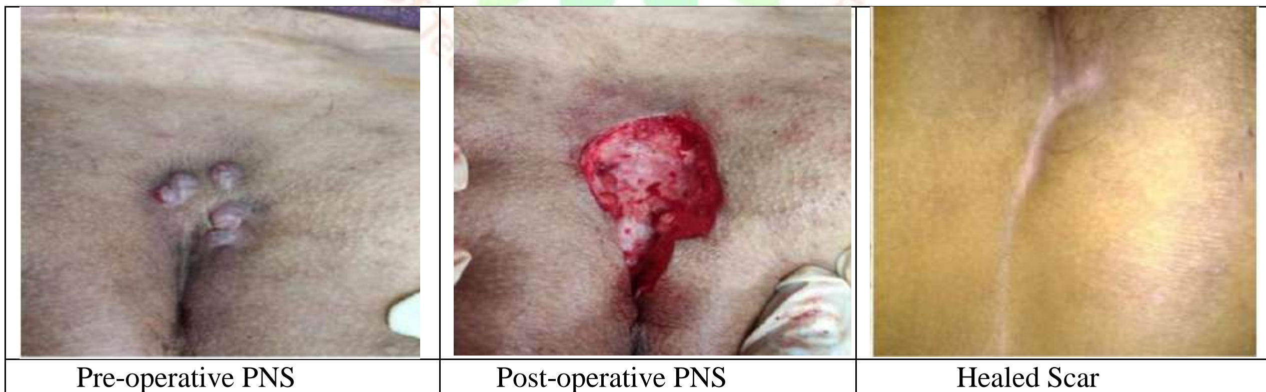
ON EXAMINATION: External opening was observed on intergluteal cleft, one at right side of intergluteal region and other on mid intergluteal cleft. On palpation, tenderness was present over intergluteal region & induration was present in the surrounding area. Temperature was mild raised with reddish inflamed peripheral skin and on pressure, blood mixed with pus was discharged from the track.

INVESTIGATION: All haematology investigations were found within normal limit. In USG local (intergluteal cleft): 47 mm long & 4 mm wide superficial subcutaneous pilonidal sinus was seen with one external opening at intergluteal cleft and the other in the left gluteal region.

THERAPEUTIC INTERVENTION: Excision of pilonidal sinus under local anaesthesia followed by *Panchvalkal Kwath Prakshalan* with application of *Yastimadhu Malhar*

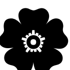
RESULT: During 1st week of dressing, wound was apparently unhealthy, adherent slough was present with foul smell and tenderness present over the wound site. In the subsequent week, the same dressing was done on alternate days for three weeks in which pain and foul smell gradually decreased, and was absent by 2nd week; and slough also gradually decreased, and wound became healthy at the end of 3 weeks. At the end of one month, weekly once dressing was done. Complete wound healing was observed on 45th day. The patient was followed up for four months without any further recurrence of above complaints.

CONCLUSION: *Chedana* (excision) of pilonidal sinus followed by *Panchvalkal Kwath Prakshalan* with application of *Yastimadhu Malhara* can be an useful treatment modality to cure pilonidal sinus. Further this type of cases can be studied in large population to assess the effectiveness of this Ayurvedic management on pilonidal sinus.



Pre-operative PNS	Post-operative PNS	Healed Scar

142. Patel Pragati S., Sonani Snehal R., Dudhamal. T.S. Management of Pilonidal Sinus by Ayurvedic Treatment Modalities. Indian J of Ancient & Yoga. 2023;16(2): 91–95. [p-ISSN 0974- 6986, e-ISSN 0974 - 6994]. DOI: https://dx.doi.org/10.21088/ijamy.0974.6986.16223.5 www.rfppl.co.in https://rfppl.co.in/view_abstract.php?jid=1.&art_id=13758



Efficacy of Lakshadi Plaster and Laksha Guggulu in the management of Bhagna (stable Colle's fracture)[143]

CASE REPORT: A 70-year-old female patient of *Kaph-Pittaja Prakriti* was treated for Colle's fracture after having a fall on left hand. She complained of pain, tenderness, and swelling on the left forearm.

EXAMINATION: on examination ecchymosis and restricted movement of the wrist joint along with dinner fork deformity was noted. The x-ray of left wrist joint (AP view) showed the partial displaced fracture of the lower end of radius.

INVESTIGATIONS: Left wrist X-ray of patient after 2nd day of history of fall was done. All the routine laboratory investigations were done and found to be within normal range.

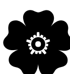
THERAPEUTIC INTERVENTION: After confirmation of diagnosis on the basis of clinical and radiological findings; *Lakshsadi* plaster was applied below elbow joint and kept for 7 days. After 7 days again *Lakshsadi* plaster was reapplied when swelling was reduced. Likewise *Lakshsadi* plaster was kept for 4 weeks in *Sambandha* state. After 3 weeks plaster was removed and X-ray was done. It was noted that there was proper union of fracture bone. Later the patient was treated by *Murivenna Taila Abhyanga* (oleation) and *Parisheka* (pouring of oil) for 15 days. The plaster was not too tight so the patient was completely cured without any deformity or stiffness after one and half months. 4 tablets of *Laksha Guggulu* 250 mg thrice daily (i.e., 1 g/day) with luke warm water after food for 30 days was given.

RESULTS: Left wrist X-ray of patient after *Lakshadi* Plaster application after 4 weeks showed complete union at the lower end of radius.

CONCLUSION: In replace of POP we can use *Lakshadi* Plaster and *Laksha Guggulu* for immobilization and bone healing for *Bhagna*.

BEFORE TREATMENT	AFTER TREATMENT

143. Dudhamal T S, Mahanta V D, Gupta S K; Efficacy of Lakshadi Plaster and Laksha Guggulu in the Management of Bhagna (Stable Colle's Fracture); *International Journal of Ayurvedic Medicine, 2012, 3(2), 124-129* [ISSN: 0976-5921] http://ijam.co.in
https://www.researchgate.net/publication/277327983_Efficacy_of_Lakshadi_Plaster_and_Laksha_Guggulu_in_the_Management_of_Bhagna_Stable_Colle's_Fracture_Case_Report



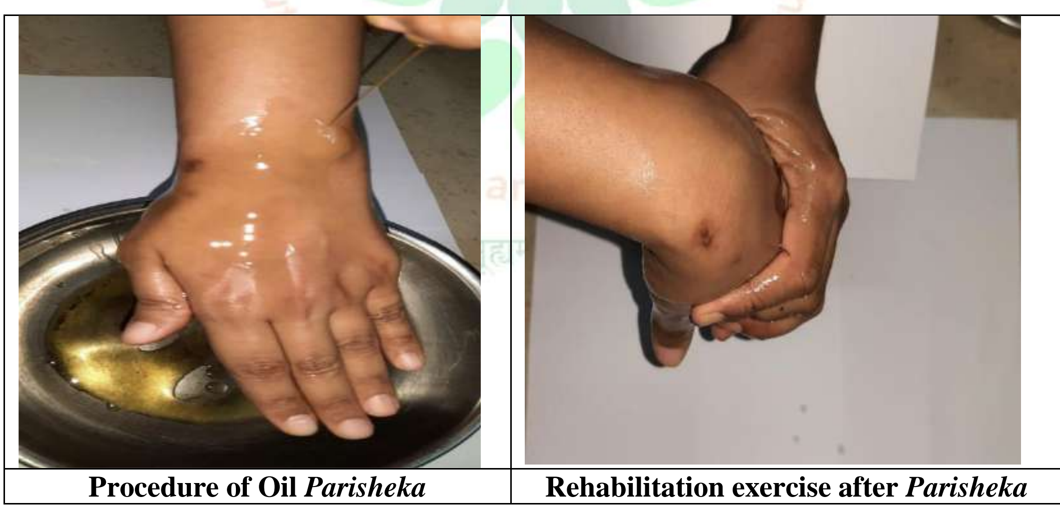
Management of post fracture stiffness by Murivenna Taila Parisheka with rehabilitation exercise-a case report[144]

CASE DESCRIPTION: A 25 year old female patient had complaint of painful restricted movement, stiffness & swelling at left wrist joint. Patient had history of road accident and got comminuted fracture of distal end of left radius 35 days back. Patient consulted orthopedic surgeon and close reduction with percutaneous K-Wire fixation was done following plaster of paris cast for 35days. POP and K-Wire was removed on 35th day, and analgesic tablet Zerodol-SP (Aceclofenac 100mg, Serratopeptidase 15mg and Paracetamol 325mg) in SOS was given as patient had severe pain. After removal of POP and K-Wire, she had stiffness at left wrist joint, restricted joint movement, pain on movement and swelling.

EXAMINATION: Surgical mark on left wrist joint laterally, swelling on dorsal aspect of wrist on inspection, & on palpation there was severe tenderness with fully restricted active or passive movements.

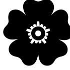
THERAPEUTIC INTERVENTION: Lukewarm *Parisheka* of *Murivenna Taila* followed by rehabilitation exercises. *Murivenna Taila* was heated indirectly until the temperature of the oil was slightly warmer than body temperature. The cotton pieces was dipped in the warm oil and poured by squeezing cotton pieces (*Parisheka)* on the left wrist joint for 10 min once a day followed by rehabilitation exercise like palmar flexion, dorsi flexion and radial deviation as advised by orthopedic surgeon. Each exercise was advised to perform for 5-7times after *Parisheka* for 15 mins for consecutively 30 days.

RESULT: After 4 weeks of *Parisheka* with *Murivenna Taila* patient had significant improvement in stiffness, tenderness, pain and in swelling. Patient had complete relief in pain, swelling and achieved complete painless range of movement after completion of four weeks of treatment. Pain was assessed by Visual Analogous Scale. She has started her routine activities from 4th week onwards.



Procedure of Oil *Parisheka*	**Rehabilitation exercise after *Parisheka***

144. Hetal Koriya, Dudhamal TS. Management of Post Fracture Stiffness by Murivenna Taila Parisheka with Rehabilitation exercise-A Case Report. International Journal of AYUSH Case Reports. 2022; 6(3): 285-288. [e-ISSN-2457-0443] http://www.ijacare.in
https://www.researchgate.net/publication/373216433_INTERNATIONAL_JOURNAL_OF_AYUSH_CASE_REPORTS_IJA-CARE_Management_of_Post_Fracture_Stiffness_by_Murivenna_Taila_Parisheka_with_Rehabilitation_exercise-A_Case_Report



Excision of Medoja Granthi (Lipoma) at ring finger of hand a rare location -a case study[145]

CASE DESCRIPTION: A 67 year old female patient had complaints of painless cystic swelling in ring finger of left hand since last five years. Gradually it increased in size, and patient felt mild pain in the finger.

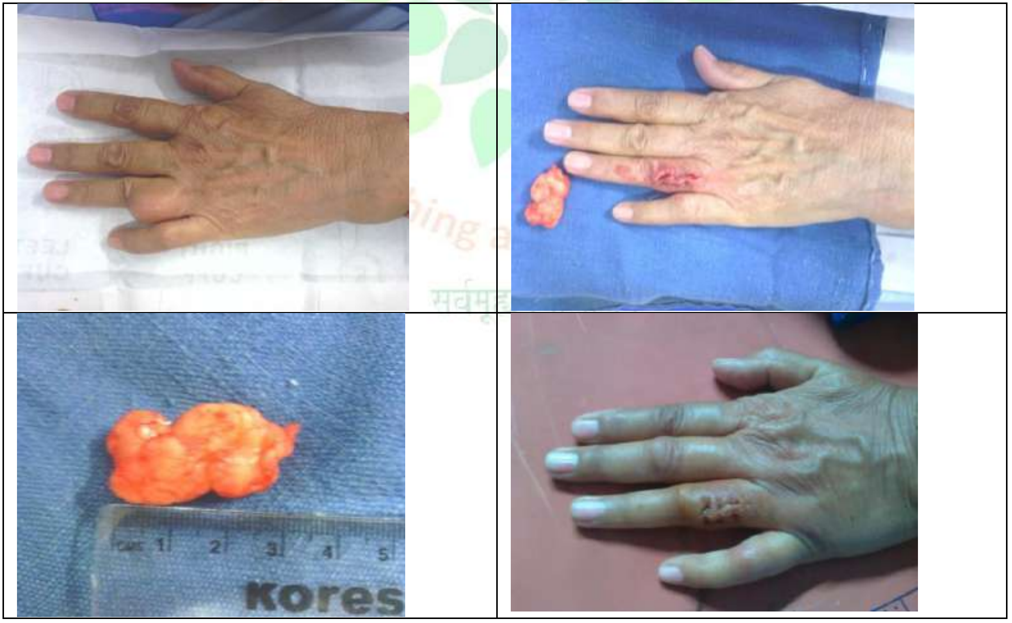
ON EXAMINATION: A cystic swelling was found at proximal part of ring finger of left hand with tense and fixed to the base. No fluctuation in swelling observed, and on the basis of clinical findings it was found to be implantation dermoid cyst.

INVESTIGATION: The X-ray findings were suggestive of no bony abnormalities, and only soft tissue swelling was observed. For that routine blood investigations at baseline were carried out and found within normal limit [TLC-8900/cu mm, (DLC: N-60, L-32, E- 4, M-4), Hb%-12.1 gm%, ESR-60mm/hour, Platelet-257000/cu mm, FBS- 91 mg/dl, PPBS-108 mg/dl, serum creatnine-0.8 mg/dl].

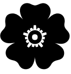
THERAPEUTIC INTERVENTION: Under local anaesthesia, with all aseptic precautions, vertical incision was taken and excision of lipoma was done. Three skin stitches were taken with ethilon 3-0 (non-absorbable suture) to obliterate the created dead space and bandaged. The length of lipoma was approx. 3cm and width 1.5cm. Tab. cefadroxyl 500mg two times for 5 days and tab. diclofenac sodium two times for 3 days were prescribed with tab. *Triphala Guggulu* 1gm three times a day was prescribed for 7 days.

RESULT: Stitches were removed after seventh post-operative day and found proper approximation of margins without complication. Patient did not report any post-operative complication and drug reaction during course of treatment.

CONCLUSION: The lipoma can occur at rare places like fingers and need to be excised.



145. Dudhamal TS. Excision of Medoja Granthi (Lipoma) at ring finger of hand a rare location - A case study. Journal of Ayurvedic and Herbal Medicine (J. Ayu. Herb. Med.) 2016; 2(6): 202-203. [ISSN: 2454-5023]. www.ayurvedjournal.com
https://www.researchgate.net/publication/318969433_Excision_of_Medoja_Granthi_Lipoma_at_ring_finger_of_hand_a_rare_location-A_case_study

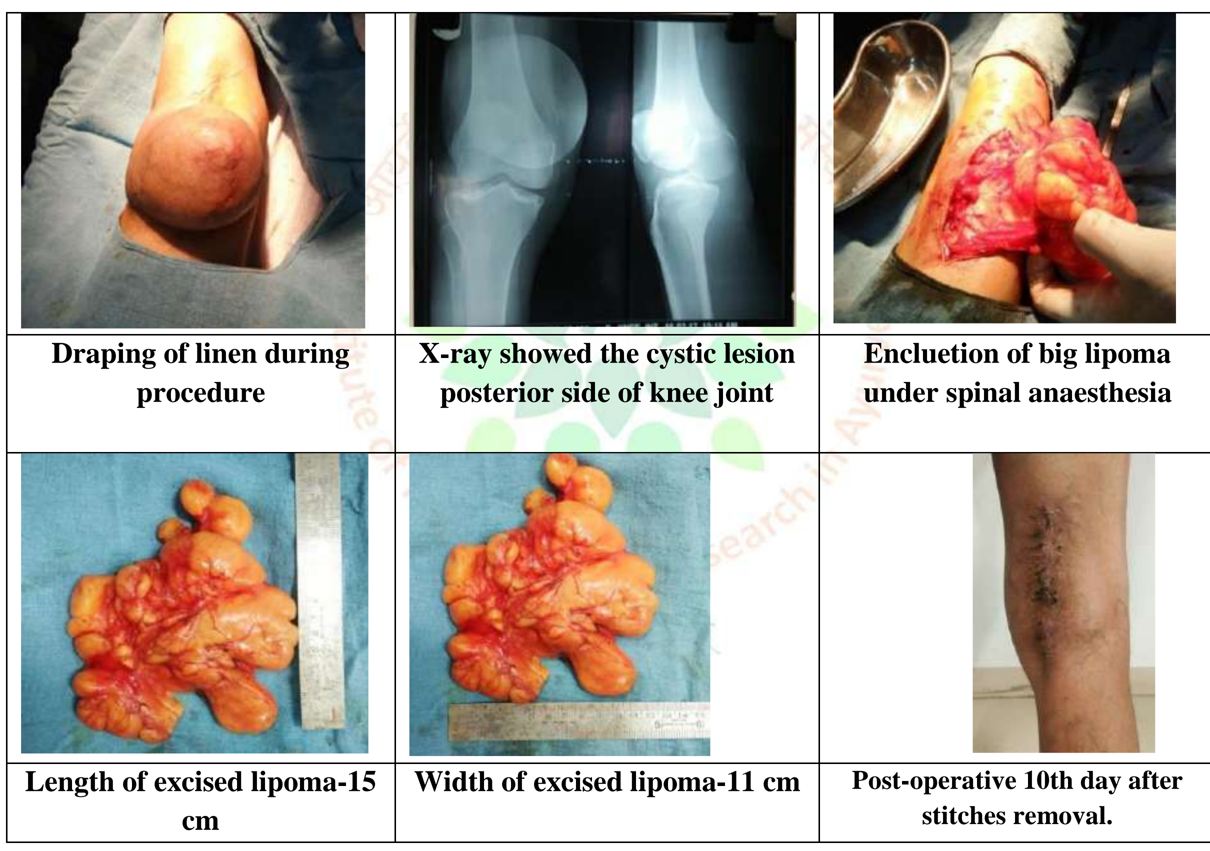


Excision of big lipoma in poplitial fossa which mimics to Backers cyst-clinical images[146]

CASE DESCRIPTION: On the basis of history, clinical local findings and X-ray report diagnosis was made as lipoma was at a rare location. Planned excision under spinal anesthesia (5% lignocaine hydrochloride heavy in L3-L4 space) was done. The excised encapsulated lipoma was of massive size (15 cm x11 cm), beyond surgeon's imagination.

THERAPEUTIC INTERVENTION: The lipoma was enucleated completely, and patient shifted to ward in stable condition. The post-operative wound was exposed to see any collection in dead space, after analyzing the wound to be normal, stitches were done.

RESULT: The patient recovered completely after removal of stitches on post-operative 10th day. No post-operative complications were found in this case, and patient recovered uneventfully.



Draping of linen during procedure	X-ray showed the cystic lesion posterior side of knee joint	Encluetion of big lipoma under spinal anaesthesia
Length of excised lipoma-15 cm	**Width of excised lipoma-11 cm**	**Post-operative 10th day after stitches removal.**

146. Dudhamal TS, Dangar MS. Excision of big lipoma in popliteal fossa which mimics to Backers cyst- Clinical images. International Journal of AYUSH Case Reports.2018; *2*(4): 35-39. [ISSN: e-2457-0443]. www.ijacare.in
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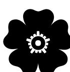


Modified Raktamokshna as Chinese cupping therapy in acute pain management of Lumbar spondylosis-a rare case report[147]

CASE DESCRIPTION: A 54 year old male patient had complaints of severe low back pain which was radiating to both legs since 1 year with painful restricted movement of lumbar joint. Patient was unable to walk for long distance since last 4 months. Patient reported history of taking allopathic analgesics but there was no relief in pain. As there was only temporary relief in pain so the ortho surgeon advised for laminectomy. Patient was non-hypertensive, non-diabetic and did not have any symptoms of endocrinal disorders, and was without any operative history or any other systemic disease.

ON EXAMINATION: The restricted movement of leg and painful forward bending was observed. Schobar test distance increases 3 cm, and Straight leg raising (S.L.R.) test /Lasegue sign was noted, and was found to be 15° in the left leg and 75°in right leg.

INVESTIGATION: The laboratory investigation for blood was done before and after the treatment, and was found within normal limits. Special investigations for HIV, HBsAg was done and patient was negative for both the tests. X-Ray of lumbosacral spine (AP and lateral view) showed lumbar spondylotic changes with multiple anterior osteophytes, and L4-L5 & L5-S1 level show prolapsed disc s/o PID IV disc were noted.

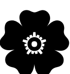
THERAPEUTIC INTERVENTION: After written consent the patient was treated with wet cupping in sitting by 7 days interval. Local *Snehan* was done with *Tila Taila* followed by *Nadi Swedana* with *Dashmool Kwath* was done on the lower back region. In first sitting 3 cups were applied at back region and three cups were applied at both legs. In second sitting (after 7 days) again 3 cups at lumbar region and 3 cups at right leg only were applied as pain was only in right leg after fist sitting.

RESULT: After 1st sitting, patient got 40 % relief in *Katishula, Katistambha, Katisuptata, Akunchan Prasarane Pravritti Savedana*. Schobar test distance increased 0.5cm. Forward flexion was increased up to 70°. S.L.R was increased up to 45°in left leg and 75 in right leg. After 2nd sitting he got 70% relief in above symptoms. There was significant change in walking for long distances. He was then able to walk and perform his daily routined work comfortably and without pain.

CONCLUSION: *Raktamokshana* by Chinese cupping is an office procedure, effective, simple, and safe for pain management of patients having lumbar spondylosis.

1st sitting of Cupping	2nd sitting of Cupping

147. Rai M, Dudhamal TS. Modified Raktamokshna as Chinese cupping therapy in acute pain management of Lumbar spondylosis - A Rare Case Report. INTERNATIONAL JOURNAL OF AYUSH CASE REPORTS. [ISSN: 2457-0443] www.ijacare.in
https://www.researchgate.net/publication/360588445_Modified_Raktamokshna_as_Chinese_cupping_therapy_in_acute_pain_management_of_Lumbar_spondylosis_-A_Rare_Case_Report



A clinical evaluation of Raktamokshana and Trayodashanga Guggulu in management of Katigata Vata w.s.r. to lumbar spondylosis.[148]

PURPOSE: To study the efficacy of Raktamokshana with or without oral intake of Trayodashanga Guggulu in management of lumbar spondylosis.

MATERIAL AND METHODS:

STUDY DESIGN: An open labelled randomized clinical trial.

SELECTION OF PATIENTS: Patients of *Katigata Vata* presented with sign and symptoms of *Kati Shoola* (pain in lumbar area) measured according to VAS scale, *Kati Stambha* (stiffness/rigidiness of lumbar joint), *Kati Suptata* (numbness), *Akunchan Prasarane Pravrutti Savedana* (restricted movement) were selected and enrolled in the study randomly, irrespective of their caste, sex gender, religion, etc.

INCLUSION CRITERIA: Patient suffering from *Katigata Vata* (lumbar spondylosis) with age group between 40-70 years of either sex was included. Patients of *Katigata Vata* with controlled cases of diabetes mellitus were also included in the study.

EXCLUSION CRITERIA: Age below 40 years and above 70 years, patients of uncontrolled diabetes mellitus, R.A. (Rheumatoid arthritis) positive, & other diseases like paralysis, Parkinson's disease, severe anaemia, malignancy, pregnancy or protrusion of lumbar disc & prolapsed disc were excluded from the study.

TREATMENT:

	Group A	**Group B**
No. of patients	15	15
Intervention Raktamokshana	*Raktamokshana* followed by placebo capsule (Roasted *Suji* powder)	*Raktamokshana* followed by *Trayodashanga Guggulu*
Dose	500mg 2 caps TDS after meal for one month	500mg 2 *Vati* TDS after meal for one month
Duration	Two sittings in 15 days interval	Two sittings in 15 days interval

Overall Result of Therapy:
Group A: 33.33% patients (n=5) were found to have moderate improvement, 46.67% patients (n=7) showed marked improvement and 20% patients (n=3) showed complete remission.
Group B: 33.33% patients (n=5) were improved moderately, 33.33% patients (n=5) were improved markedly and 33.33% patients (n=5) recovered completely.
The recurrence of symptoms was found in 20% cases i.e., in 3 patients of Group A and 3 patients of Group B during follow up period.

CONCLUSION: *Raktamokshana* along with *Trayodashanga Guggulu* has shown effectiveness in the management of *Katigata Vata* without any noted side effects during the study or follow up period.

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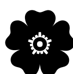
148. Rai M, Dudhamal TS. A Clinical evaluation of Raktamokshana and Trayodashanga Guggulu in management of Katigata vata w.s.r. to Lumbar spondylosis. The Healer. 2020; 1(1):1(1); 7-18. [eISSN : 2738-9634 pISSN : 2738-9863] www.thehealearjournal.org
https://www.researchgate.net/publication/348982369_A_Clinical_evaluation_of_Raktamokshana_and_Trayodashanga_Guggulu_in_management_of_Katigata_vata_wsr_to_Lumbar_spondylosis



Management of tennis elbow by Agnikarma[149]

CASE DESCRIPTION: This study reports the case history of a 38-year-old lady of *Vata Kaphaja Prakriti* with a classical tennis elbow. The patient suffered from *Shoola* (severe pain), *Stambha* (stiffness) and restricted movement in lateral part of right *Kurpara Sandhi* (elbow joint), *Hasta* (palm), and *Anguli Pradesha* (fingers) for a period of 8 months. No particular reason for the onset recounted, no obvious trauma, may be affected due to lifting of water buckets by the patient for house hold work.

ON EXAMINATION: Gradual onset of the condition over 8 months; condition worsened leading to inability of the patient to grip the object properly by the affected hand. Maximum tenderness was noticed at the right lateral epicondylar region of humerus with no obvious swelling of the elbow joint. On active movement assessment of the joints, it was observed that full extension of right elbow joint with resisted extension of right wrist joint elicited maximum pain.

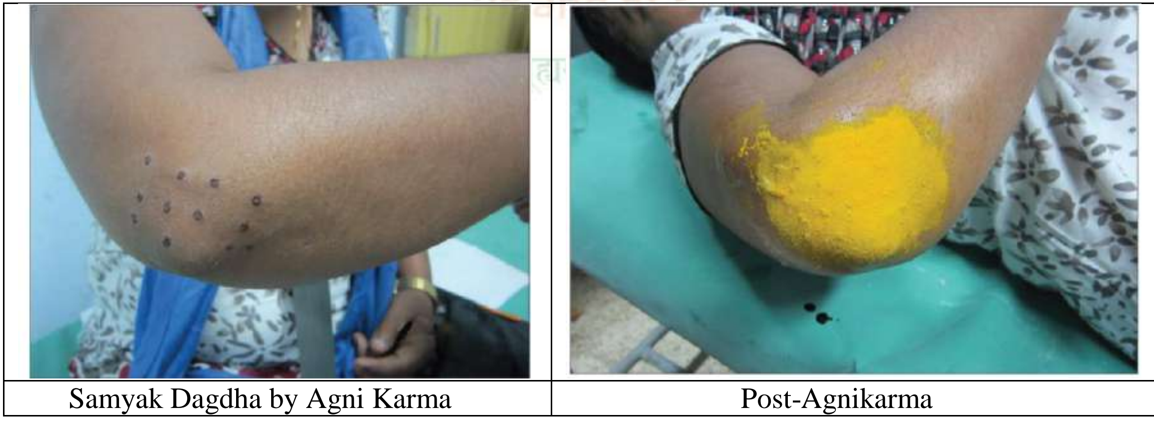
The patient admitted to be under the treatment of an orthopaedic surgeon for tennis elbow for last 8 months without any significant relief in the symptoms.

INVESTIGATION: Both assessments of RA (Rheumatoid arthritis) factor and X-ray of hand were found to be normal. With elimination of these two conditions and owing to the typical clinical presentation of the case, the patient was diagnosed to be a case of tennis elbow.

THERAPEUTIC INTERVENTION: After careful assessment and examination, the patient was treated with *Agnikarma* alongwith oral medication of *Ashwagandha* powder 4 g, and *Navajivana Rasa* 250 mg, twice a day with luke warm water for 3 weeks.

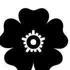
RESULT: With this short duration of treatment protocol, patient got relief from pain with increase in grip power in the affected hand without any untoward effects.

CONCLUSION: This study aimed to report *Agnikarma* with minimal drug use as a safe and effective in-office based treatment approach in patients with Tennis elbow.



Samyak Dagdha by Agni Karma	Post-Agnikarma

149. Vyasadeva Mahanta, Tukaram S. Dudhamal, Sanjay Kumar Gupta; Management of Tennis Elbow by Agnikarma; www.jaim.in DOI: 10.4103/0975-9476.109552; Journal of Ayurveda & Integrative Medicine | January-March 2013 | Vol 4 | Issue 1
https://www.researchgate.net/publication/237060923_Management_of_tennis_elbow_by_Agnikarma



Clinical efficacy of wet cupping therapy in the management of Raktavrtha Vata wsr tennis elbow–a case report[150]

CASE DESCRIPTION: A 42-year-old female had complaints of severe pain in bilateral elbow with burning sensation and swelling. She was unable to hold heavy objects and do household activities like kneading dough, holding vessels, do the dishes, wash clothes etc due to pain. The patient developed pain and burning sensation over the lateral elbow before one year, but did not consult a doctor. Gradually the symptoms got worsened, along with swelling over the lateral elbow with inability to do household activities. Following, she consulted an Orthopaedician and took medications for the same but got only mild relief. There was no relevant medical history or any history of injury. Medication history showed intake of analgesics and steroid injection.

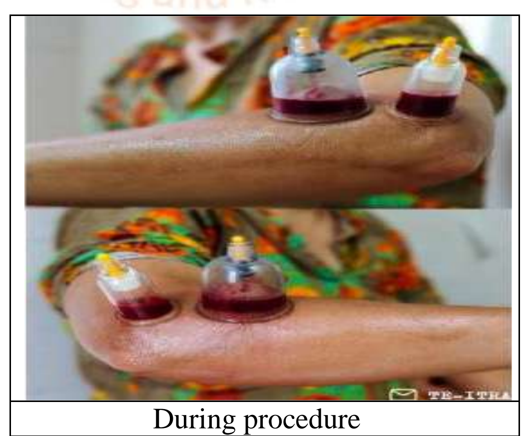
ON EXAMINATION:
Inspection - Swelling present over the lateral area of elbow surrounding lateral epicondyle.
Palpation - Non-pitting oedema present over the lateral area of elbow surrounding lateral epicondyle. Severe tenderness over the lateral epicondyle and area surrounding
ROM - Flexion, Extension, Supination, Pronation (Active and Passive): Within normal limits
Special tests for tennis elbow: Mill's test-Positive; Cozen's test-Positive; Maudsley's test-Positive

INVESTIGATIONS: CBC, ESR & Auto antibodies (to rule out inflammatory arthritis) were found in normal limit. Serological investigations such as HIV, HBsAg, HCV & VDRL were non-reactive. Bleeding time was 2 min 5 sec & clotting time was 3 min 4 sec.X-Ray of both elbow (AP view) was done to rule out elbow arthritis.

THERAPEUTIC INTERVENTION: Total 6 times wet cupping therapy done on bilateral elbows and after that *Ksheerabala* 101 – 2 capsules two times a day was advised.

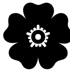
RESULT: After 6th sitting of cupping therapy, there was no pain; tenderness and burning sensation were absent.

CONCLUSION: Cupping therapy, a modified *Raktamokshana* procedure is effective in relieving the symptoms of tennis elbow and helps to augment the functioning of elbow joint by letting out the impure blood leading to increased microcirculation over the affected site.



During procedure

150. Reshma Rajeevan, Dudhamal TS. Clinical efficacy of Wet Cupping therapy in the management of Raktavrtha Vata WSR Tennis elbow– A Case Report. International Journal of AYUSH Case Reports. 2022; 6(3): 222-260. [e-ISSN-2457-0443] http://www.ijacare.in
https://www.ijacare.in/index.php/ijacare/article/view/355



Agnikarma (therapeutic heat burn) an unique approach in the management of Vatakantaka w.s.r. to plantar fasciitis-a single case report[151]

CASE DESCRIPTION: A 47 year-old male patient had complaints of pain in right heel region for 5 months. Pain and stiffness were worst after waking up from bed at morning and cause difficulty in walking. The patient was apparently normal before 5 months. Patient gradually developed pain and stiffness in right heel. The body weight of patient was 91 kg. Patient reported history of trauma by stone to right heel before 6 months. He visited a government hospital and was treated with NSAIDs and physiotherapy for 3 months but didn't get complete relief from symptoms.

ON EXAMINATION: There was no evidence of redness or swelling found on right heel. Grade III tenderness (Dr Frank Painter's grading) found at posteromedial aspect of right heel on palpation. Windlass test was positive in right side of foot.

INVESTIGATION: ESR was 26mm/hr, and X-ray of right foot antero-posterior and lateral view demonstrates normal findings. On the basis of history and clinical examination the patient was diagnosed as a case of *Vatakantaka*.

THERAPEUTIC INTERVENTION: Patient was treated with *Rasna Saptak Kwatha* 20ml orally before meal for one month. In supine position, maximum tender point was located in the right side of heel region, and marked with pen. Cleaning of local part with *Triphala Kashaya* was done & then it was wiped with dry sterile gauze. 10-15 *Samyak Bindu Dagdha* was made with red hot *Panchdhatu Shalaka* at right heel. Simultaneously aloe-vera pulp was applied to minimize burning sensation & then dusting of *Haridra* powder was done. Patient was advised to avoid water contact for 24 hours, and to apply cow *Ghee* in the burnt part twice a day. This same procedure was repeated after 7 days. Total 4 sittings of *Agnikarma* was done.

RESULT: Patient got complete relief from symptoms and there was no recurrence of symptoms in 2 months of follow up period.

CONCLUSION: *Agnikarma* is a safe and cost effective OPD based procedure to manage *Vatakantaka &* with oral use of *Rasna Saptaka Kwatha* yields better results.

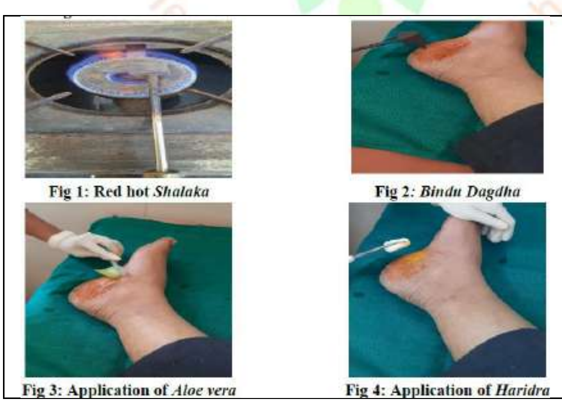
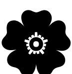


Fig 1: Red hot *Shalaka*
Fig 2: *Bindu Dagdha*
Fig 3: Application of *Aloe vera*
Fig 4: Application of *Haridra*

151. Ganatra R, Kapadiya M, Dudhamal TS. *Agnikarma* (therapeutic heat burn) an unique approach in the management of *vatakantaka* w.s.r. to plantar fasciitis- A single Case report. Int. J. AYUSH CaRe. 2021; 5(1):30-35. [e-ISSN-2457-0443] http://www.ijacare.in
https://www.researchgate.net/publication/350941828_INTERNATIONAL_JOURNAL_OF_AYUSH_CASE_REPORTS_IJA-CARE_Agnikarma_therapeutic_heat_burn_an_unique_approach_in_the_management_of_vatakantaka_wsr_to_plantar_fasciitis-A_single_Case_Report_Quick_Response_co



Siravedha-a para surgical approach in the management of plantar fasciitis-a single case study[152]

CASE DESCRIPTION: A 42 year old homemaker woman had complaint of pain in right inferior heel since last 2 years. The pain got worse with initial footsteps after rest and prolonged standing. The visual analogue score was 8 in the patient. The patient had a significant history of excessive walking with flat lathered footwear. There was no history of trauma to heel. The patient has consulted a general practitioner, and taken analgesics of unknown nature for last 1 year. At the time of consultation the patient was not under any type of medicaments.

ON EXAMINATION: Diffuse swelling (Grade 3) and mild redness was noted in the right inferior heel region. On palpation- tenderness (Grade 4) was illustrated at the posteromedial aspect of the heel. Passive dorsiflexion of toes of right foot aggravated the pain (Windlass test positive).

INVESTIGATION: All routine blood investigations were found within normal limit.

An X-ray (lateral view) of the right foot was done, and there was absence of calcaneal spur. But local ultrasound examination of the plantar region revealed an abnormal thickness of about 5.9 to 7.3 mm of the plantar fascia on the right side of the foot.

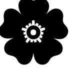
THERAPEUTIC INTERVENTION: The patient was treated with 2 sittings of *Siravedha* (40ml/sitting) at an interval of 15 days along with adjuvant Ayurvedic medications: *Rasna Saptak Kwath* 20 ml BD in empty stomach orally for 1 month.

Outcome measurements and follow up: The patient was assessed every 7 days for pain, swelling, and tenderness. At the end of 7 days, the VAS score became 05, and swelling reduced up to Grade II. Windlass confirmatory test for plantar fasciitis was negative after 15 days of treatment, and the patient didn't sense pain during initial footsteps after rest. After 21 days significant improvement was found in the patient, as the VAS score became 3, the swelling was completely reduced and tenderness changed from grade 4 to grade 1.

Assessment Criteria	Before treatment	After 7 days	After 15 days	After 21 days	After 28 days
Pain in heel	08	05	05	03	00
Swelling	03	02	02	00	00
Tenderness	04	02	02	01	00
Windlass test	Positive	Positive	Negative	Negative	Negative

RESULT: At the end of treatment (after 28 days), pain in heel, swelling and tenderness were absent, and Windlass test was found to be negative.

152. Ridhhi Ganatra, Dudhamal TS. Siravedha a para-surgical approach in management of plantar fasciitis-A single case report. The Healer Journal 2022; 3(1): 62-66. [e ISSN : 2738-9634 p-ISSN: 2738-9863]. www.thehealerjournal.org
https://www.researchgate.net/publication/361172321_Siravedha_a_Para_Surgical_Approach_in_the_Management_of_Plantar_Fasciitis_-_A_single_case_report



Management of Amavata (rheumatoid arthritis) with diet and Virechanakarma[153]

CASE DESCRIPTION: A 45 year old house wife having 60 kg body weight, of *Vata-Pittaja Prakriti*, residing in an urban area, was suffering from multiple joint pain (of the 2nd and 3rd metacarpophalangeal joints, and 2nd & 3rd proximal interphalangeal joints) of both hands along with swelling, severe morning stiffness, restricted movements, malaise, and *Mandagni* (poor appetite) for the past 1½ year. She also had disturbed sleep with aggravating pain at night. Sometimes symptoms got severe & the patient got incapacitated for walking & standing even after taking strong pain killers. There was a history of occasional joints pain since 2009, and most of the times, it was mild in nature and rarely required any anti-inflammatory or analgesic drugs. A single dose of NSAIDs was sufficient for pain relief whenever required. Pain was of shifting nature and gets aggravated during rainy and winter seasons. There was no history of addiction or past medical history except caesarean section for two children in 1993 and 2001, uneventfully.

ALLERGIC HISTORY: The allergy screening test was also carried out and allergy was reported with carrot (+++), *Dal Chana* (+++), lemon (+++), coconut (++), almond (++), yeast (++), house-dust-mite (+++), Aspergillus fumigatus (+++), perfume (++), aspirin (++), ibuprofen (+), and diclofenac (++).

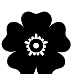
INVESTIGATION: The diagnosis was confirmed as *Amavata*/RA (having 7/10 score as per the RA classification criteria, 2010) and by performing routine blood investigations and some specific investigations such as rheumatoid factor, ESR, immunoglobulin E (IgE), and CRP tests.

THERAPEUTIC INTERVENTION: After proper *Deepana-Pachana* and *Abhyang-Swedan*, *Virechana Karma* was done by administration of 100 gm *Trivrita Avaleha* and 20 ml castor oil at 10 am (*Pitta Kala*) on the 9th day of commencement of the treatment. About 3 h later, *Virechana Vega* started, and a total 15 *Vega* (passed stool) were observed till the evening. From 10th day onward, *Sansarjana Krama* (a process of resuming normal diet) was started. After completion of the *Sansarjana Krama*, by 7th day the patient was put on the normal diet.

RESULT: The patient felt 40% relief in pain and stiffness of the joints. The requirement of anti-inflammatory and analgesic drugs (indomethacin and tramadol) was reduced to 50%. The patient was getting sound sleep after taking one tramadol capsule of 100 mg, at night. Meanwhile, the patient was screened for allergy with food, drugs, and inhalants by sending blood sample to endocrine laboratory, Ahmedabad. According to the findings, all known allergy-causing foods, drugs, and inhalants were restricted in routine usage as far as possible. The patient felt relief gradually. After 3 months of *Virechana Karma* and on adopting the usual diet except allergens, the patient felt significant relief in the signs and symptoms of *Amavata*.

CONCLUSION: *Virechanakarma* followed by the *Vishishta Nidana Parivarjana* in the form of food and drugs showed remarkable symptomatic relief in the features of *Amavata*. This observation needs further recognition by assessing in larger samples of *Amavata*/RA.

153. Gupta SK, Anup B. Thakar AB, Dudhamal TS, Nema A. Case Report- Management of Amavata (rheumatoid arthritis) with diet and Virechanakarma. AYU. 2015;36 (4):413-5. [ISSN: p-0974-8520 e-0976-9382] www.ayujournal.com.
https://www.researchgate.net/publication/308902395_Case_Report-_Management_of_Amavata_rheumatoid_arthritis_with_diet_and_Virechanakarma



Clinical efficacy of Murivenna oil Parisheka in the management of soft tissue injury w.s.r. to Achilles tendinopathy - a case study[154]

CASE DESCRIPTION: A 30 year female patient was suffering from heal pain of right foot since 1 year. Patient reported history of injury on tendo Achilles due to road traffic accident. Initially the patient was treated for wound and it healed within 2 months with hard scar tissue. Even after completion of wound treatment heel pain persisted intermittently (sometimes requiring medication), & it affected her daily life.

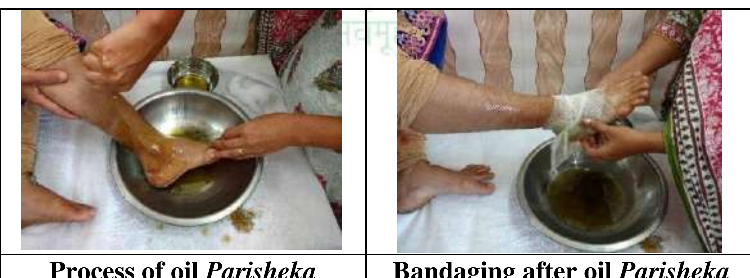
ON EXAMINATION: During examination mild swelling of foot, stiffness & tenderness was found at the point of Achilles tendon insertion. On closer inspection a healed scar was found without any superficial discolorations or marked deformity. Mild swelling (soft in consistency) was present on posterior aspect of heel. Palpation elicited tenderness (grade 2). Planter flexion, inversion & eversion were normal but painful dorsiflexion was noted. After complete examination of foot, finally the condition was diagnosed to be Achilles tendinopathy.

INVESTIGATION: X-ray foot was done, and there was no bony lesions involvement found.

THERAPEUTIC INTERVENTION: *Murivenna* oil *Parisheka* is the method of pouring the preheated oil (upto 40-50°C) on affected part from 10 inch distance for 10 minute in morning. The *Parisheka* was followed in regular interval for 4 weeks followed by simple bandaging with gauze. *Abhayanga* was done intermediately during *Parisheka. Rasnasaptka Kwatha* (20 ml bd) and *Yogaraj Guggulu* (1gm tds) were given internally as a supplement for *Snayugata Vata.*

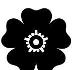
RESULT: Pain was the main symptom which was due to inflammation of the tendon. It was minimized after 15 days and completely relieved within one month. Stiffness was completely relieved after 15 days. Complete range of plantar flexion, dorsiflexion, inversion and eversion of foot were achieved within one month of procedure.

CONCLUSION: External application of *Murivenna* oil in the form of *Parisheka* was found to be effective in the management of soft tissue injuries specifically in Achilles tendinopathy and improved its functional capacity.



Process of oil *Parisheka*	**Bandaging after oil *Parisheka***

154. Naresh Ghodela, Princy Prasad, Dudhamal TS. Clinical efficacy of *Murivenna* oil *Parisheka* in the management of soft tissue injury w.s.r. to achillis tendinopathy - a case study. European Journal of Biomedical and Pharmaceutical sciences (EJBPS). 2017; 4(6):496-498. [ISSN 2349-8870] http://www.ejbps.com SJIF Impact Factor 4.382.
https://www.researchgate.net/publication/334612202_CLINICAL_EFFICACY_OF_MURIVENNA_OIL_PARISHEKA_IN_THE_MANAGEMENT_OF_SOFT_TISSUE_INJURY_WSR_TO_ACHILLIS_TENDINOPATHY_-A_CASE_STUDY



Clinical effect of Madhu Amalaki Rasayan (MAR) in the treatment of Amlapitta. w.s.r. to Acid peptic disorders[155]

PURPOSE: To evaluate the clinical efficacy of *Madhu Amalaki Rasayan* (MAR) in the treatment of Amlapitta w.s.r. to APD.

MATERIALS AND METHODS:

STUDY DESIGN: An open labelled randomized clinical trial of 80 patients irrespective of age, sex, occupation and religion were selected.

INCLUSIVE CRITERIA: Patients of age group 16-60 yrs of age suffering from *Amlapitta* or symptoms similar to APD, initial stage of gastric ulcer, duodenal ulcer and dyspepsia were included.

EXCLUSION CRITERIA: Perforated peptic ulcer, CA stomach, esophagus reflux and chronicity more than 6 years cases were excluded.

INVESTIGATIONS: Routined hematology like: TLC, DLC, ESR, Hb%, RBS, blood urea, Sr. creatinine and LFT were done. Barium meal X-ray for stomach and duodenum (wherever required), gastroduodenoscopy in suspected cases of carcinoma with routine and microscopic urine examination, and routine & microscopic stool examination especially for occult blood were done.

Group A (Treated Group): 50 patients were treated with 250 mg tablet of *Madhu Amalaki Rasayan* two times a day in empty stomach followed by 12 hours funnel soaked water for consecutive 30 days.

Group B (Control Group): 30 patients were treated with 20mg tablet of Famotidine two times a day in empty stomach for 30 days.

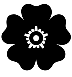
Follow-up: Two months.

OVERALL RESULT:

- Completion of the study (total cured): 47 cases.
- Improvement in sign and symptoms: more than 75% in 19 cases.
- Improvement in sign and symptoms: 25% to 50% in 10 cases.
- Improvement in sign and symptoms: less than 25% in 4 cases.

CONCLUSION: *Amlapitta* w.s.r to Acid peptic disease is a major gastro intestinal problem which is having high prevalence in the present population mainly due to adoption of unsuitable regimen and mechanical life style. The present study of *Madhu Amalaki Rasayan* showed highly significant results without any adverse effects, as the ingredients present in the formulation are having *Deepan, Pachan, Anuloma, Pittasaman, Sothaghna* and *Ropana* properties to combat the disease progression.

155. C Bhuyan Gupta SK, Dudhamal TS. Clinical Effect of *Madhu Amalaki Rasayan* (MAR) in the Treatment of *Amlapitta*. W. S. R. to Acid Peptic Disorders. Indian Journal of Ancient Medicine and Yoga. 2015;8(3): 129-134. [ISSN: p-0974-6986, e-0974- 6994] www.rfppl.com
https://www.researchgate.net/publication/300003653_Clinical_Effect_of_Madhu_Amalaki_Rasayan_MAR_in_the_Treatment_of_Amlapitta_W_S_R_to_Acid_Peptic_Disorders



Management of Arbuda (cancer) with herbomineral formulation-a pilot study[156]

PURPOSE: To evaluate the efficacy of ***Arbudaharana Rasayana*** on quality of life in various types of cancer patients.

MATERIAL AND METHODS:
STUDY DESIGN: This is an open labelled prospective pilot study.

SELECTION OF PATIENTS: Total 10 patients of non-operable malignant cases of scalp, vagina, oesophagus, colon, bladder and oral cavity were selected irrespective of age, sex and religion for this study. All the selected patients were having features of local and distant metastasis. Different types of cancer patients were included.

TREATMENT INERVATION: The ***Arbudaharana Rasayana*** (*Anubhuta Yoga*) is the combination of following herbo-mineral drugs having anti cancerous, antioxidant, immuno-modulator activities.

Table No. 1. ***Arbudaharana Rasayana*** (*Anubhuta Yoga*)

Sr. No.	Name of Drug	Ingredients	Quantity
1.	*Haridrakhanda*	*Haridra*, *Ghrita*, *Godughdha*, *Sarkara*, *Trikatu*, *Trijataka*, *Vidanga*, *Trivrit*, *Triphala*, *Keshar*, Musta, *Louha.*	4 g
2.	*Arogyavardhini*	*Parada* (Mercury), *Gandhak* (Sulphur), *Louha* (Iron), *Tamra* (Copper), *Abhrak* (Mica), *Triphala* (Combination of *Terminalia chebula, Terminalia bellerica, Emblica officinalis*), *Shilajatu* (*Asphatum panjabinum*), *Guggulu* (*Commiphora mukul*), *Chitrak moola* (*Plumbago zeylanica*), *Katuki* (*Pichrorhiza kurroa*)	250 mg
3.	*Vydadhiharan Rasa*	*Parada* (Mercury), *Gandhak* (Sulphur), *Somal* (White arsenic), *Haratal* (Yellow arsenic), *Manashila* (Red arsenic) , *Rasakarpur* (Per chloride of mercury)	150 mg
4.	*Guduchi satwa*	*Guduchi* (*Tinospora cordifolia*)	600 mg
Posology – 5 gm powder twice a day (In morning, after breakfast and in evening after light snacks) orally with Luke warm water.			

RESULTS: *Amadosha* and *Srotavorodha* are the known factors for causation of *Shotha* and *Vedana* (inflammation and pain). The *Vydadhiharan Rasa* (Rasatantra Sara, 1990) is capable to remove *Srotavorodha* by digesting *Amadosha* with increasing *Dhatwagni* (cellular metabolism) and rendered relief in the features of *Shotha* and *Vedana*. The overall effect of the ***Arbudaharana Rasayana*** (*Anubhuta Yoga*) in the cancer patients was found satisfactory with no any untoward effect observed.

CONCLUSION: Cancer is a major and global health problem and the outcome of any available therapy is still under the question, particularly in non-operable cases of malignancies. The *Arbudaharana Rasayana (Anubhuta Yoga)* is a potent formulation for providing symptomatic relief from *Arbuda* (cancer). The formulation was found effective to improve the quality of life (QOL) by rendering anti-inflammatory, analgesic, anti-oxidant and immuno-modulator activities.

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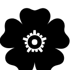
156. Mahanta Vyasadeva, Dudhamal T S, Gupta S K (2013), Management Of Arbuda (Cancer) With Herbomineral Formulation - A Pilot Study, Global J Res. Med. Plants & Indigen. Med., Volume 2(5): 374–379; [ISSN 2277-4289] www.gjrmi.com
https://www.researchgate.net/publication/255989379_MANAGEMENT_OF_ARBUDA_CANCER_WITH_HERBOMINERAL_FORMULATION_-A_PILOT_STUDY



Efficacy of leech application in the management of peripheral arterial occlusive disease (PAOD)-a rare case report[157]

CASE DESCRIPTION: A 60 year old male patient had complaints of blackish discoloration (scab like) of left thumb since last three months; tingling sensation, pallor, coldness of left hand since last 2 months; and tingling, numbness in both sole since last 2 months. He has disturbed sleep due to tingling sensation and burning pain of the left hand. He is a smoker with the habit of smoking about 30 bidis daily since last 15 years.

ON EXAMINATION: His left hand was colder as compared to right hand. Radial pulsations could not be felt in left hand while ulnar pulsation was very feeble. In right hand both radial and ulnar pulsations were feeble. Allen's test was positive and showed total occlusion of right and left radial artery while both ulnar arteries were patent. Case was diagnosed as PAOD stage IV (Fontaine classification).

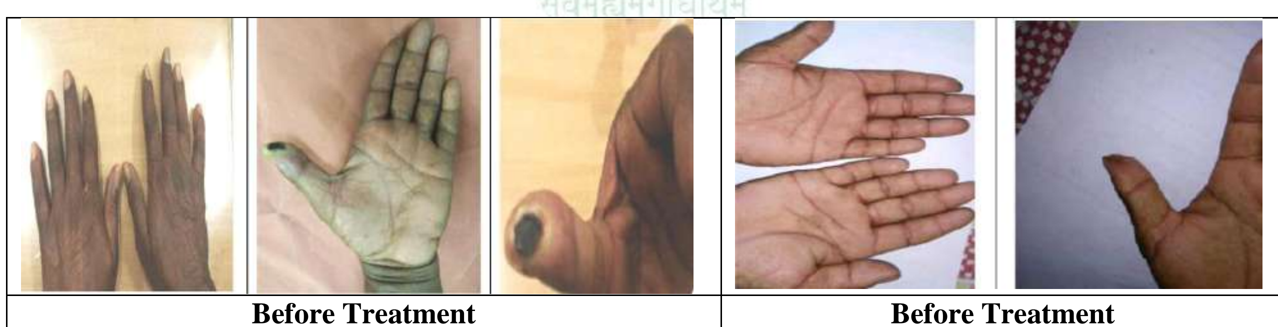
INVESTIGATION: Before leech application, coagulatory disorders like hemophilia was ruled out. Similarly, investigations were done to rule out anemia, diabetes, hepatitis and HIV.

His peripheral angiography report showed: normal right axillary artery, plaque in right brachial artery, abnormal medial course with distal total occlusion in right and left radial artery and palmar arch filled by ulnar artery, normal course and calibre with distal disease in the right and left ulnar artery, there was a plaque in the left subclavian and left axillary artery, bilateral common iliac artery and bilateral external iliac artery were normal, plaque in the bilateral superficial femoral artery and bilateral popliteal artery, multiple 50% lesion with distal diffuse disease in the left posterior tibial artery and diffuse disease in the right posterior tibial artery, bilateral anterior tibial artery, bilateral dorsalis pedis artery.

THERAPEUTIC INTERVENTION: Total duration of treatment was 2 months, first 15 days leech was applied on alternate days, after 15 days it was twice a week. Later on, leech was applied once a week for rest of the month.

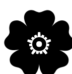
RESULT: After 13th sitting, patient got complete relief in pain, discoloration in hand, coldness of hand, tingling and numbness. Blackish discoloration/scab sloughed out itself after 11th sitting of leech application, and by 13th sitting the wound was healed completely.

CONCLUSION This case report bespeaks our experience about a rare presentation of PAOD (clusion disease) in upper limb, and management of arterial ulcer due to PAOD by leech application with symptomatic relief. Further studies in more such cases are needed for its scientific validation.



Before Treatment	Before Treatment

157. Kapadiya M, Shrestha M, Dudhamal TS. Efficacy of Leech Application in the Management of Peripheral Arterial Occlusive Disease (PAOD) - A Rare Case Report. International Ayurvedic Medical Journal (IAMJ) 2018; 2(6)1382-1387. [ISSN 2320-5091]. www.iamj.in https://www.researchgate.net/publication/340274046_EFFICACY_OF_LEECH_APPLICATION_IN_THE_MANAGEMENT_OF_PERIPHERAL_ARTERIAL_OCCLUSIVE_DISEASE_PAOD



Siravedha (venesection therapy) in the management of burning feet syndrome- a single case study[158]

CASE DESCRIPTION: A 38-year-old male bus driver of moderate built had complaints of severe burning and sweating in the left foot for 9 months. The symptoms used to get aggravate during his driving occupation, summer weather, and night-time, and comparatively less in cool weather. The patient had visited private clinics before, and had taken allopathic treatments, but without get any significant relief. She had difficulty in falling asleep occasionally because of severe burning sensation. No significant past medical or surgical history was found.

ON EXAMINATION: The strength was 5/5 in both lower limbs, with a negative Babinski sign, & normal tone & normal range of movement. On sensory examination, hyperesthesia on light touch was present in left foot. There was no change in colour, & mild sweating was seen on the left sole. Peripheral pulses were palpable in both limbs. The VAS grade for the pricking type of pain was six. The burning sensation was severe. Blood routine, blood glucose levels, urine routine/micro examinations were within normal range & serological investigations HIV & HBsAg were negative.

INVESTIGATION: Based on clinical examinations, patient was diagnosed with burning feet syndrome in left foot, as on the right foot there was no color change or hyperesthesia with a negative Babinski sign. In Ayurveda, this condition is known as *Padadaha*. The possibility of thromboangiitis obliterans was excluded as the patient was a non-smoker with no signs of discoloration or numbness in legs & the peripheral pulses palpation was normal. Blood glucose levels & sensory/motor examinations were all normal; hence possibility of diabetic neuropathy was also excluded.

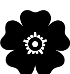
THERAPEUTIC INTERVENTION: The patient has been treated with 2 sittings of *Siravedha* i.e., 1st sitting and 2nd sitting on 8th day.

RESULT: After completion of the treatment protocol patient was assessed for any recurrence of symptoms. The patient got complete relief from symptoms and there was no recurrence of symptoms within 10 months of the follow-up period.

CONCLUSION: *Siravedha* (venesection) is an effective procedure to manage symptoms of *Padadaha*.

Material of *Siravedha*	**Procedure of *Siravedha***

158. Komal Dhalani, Ridhhi Ganatra, Dudhamal TS. Siravedha (Venesection therapy) in the management of burning feet syndrome- A single case study. International Journal of AYUSH Case Reports. 2022; 6(2): 178-182. [e-ISSN-2457-0443] http://www.ijacare.in
https://www.researchgate.net/publication/361885527_INTERNATIONAL_JOURNAL_OF_AYUSH_CASE_REPORTS_IJA-CARE_Siravedha_venesection_therapy_in_the_management_of_Burning_Feet_Syndrome-A_Single_Case_Study



Agnikarma and *Dashamoola Kwatha* in the management of De Quervain's Tenosynovitis-case series[159]

CASES DESCRIPTION:

Case 1: A 50-year-old, left-handed woman who is a homemaker reports pain and difficulty in movements of the left wrist and thumb for 1 month.

Case 2: A 30-year-old, right-handed working woman who works in the computer profession, reported pain and painful movements of her right wrist for 4 months.

Case 3: A 46-year-old left-handed homemaker woman presented with pain and swelling in the left wrist for 2 months. **Case 4:** A 30-year-old man who is a civil engineer reported pain in his left wrist for 1 month. The patient had a history of trauma on the left hand during a road traffic accident before 3 months.

ON EXAMINATION:

Case 1: Swelling (Grade III) along with the first dorsal compartment and tenderness (Grade IV) over the radial styloid process as well as all restricted range of movements of the thumb.

Case 2: Physical examinations showed swelling (Grade II) along with the first dorsal compartment and tenderness (Grade III) over the radial styloid process with restricted movements of the right thumb.

Case 3: Physical examinations showed swelling (Grade III) along with the first dorsal compartment and tenderness (Grade III) at the radial styloid process with restricted movements of the left thumb.

Case 4: Physical examinations revealed swelling (Grade I) and tenderness (Grade IV) at the radial styloid process with restricted movements of the thumb.

In all patients Finkelstein's test was positive.

INVESTIGATIONS: Hematological and biochemistry investigations such as random blood sugar (RBS) and uric acid of all four patients were reported within normal limits. All four patients had done conventional radiological imaging such as an X-ray (anteroposterior and lateral view) of the wrist joint to exclude a radial styloid fracture, scaphoid fracture, or carpometacarpal arthritis of the thumb.

THERAPEUTIC INTERVENTION: All four patients were treated with four consecutive sittings of *Agnikarma* by *Panchdhatu Shalaka* at the interval of 7 days over the radial styloid process in the wrist adopting standard operation procedures of *Agnikarma* by *Shalaka* along with systemic adjuvant Ayurvedic oral medications. *Dashmoola Kwatha* 20 ml orally twice a day empty stomach was prescribed for 1 month. Patients were advised to wear a thumb spica splint during work to avoid unnecessary friction movements of the tendon.

RESULTS: At the end of the treatment period of 1 month as compared to baseline, there was a significant reduction in pain, tenderness, and swelling found in all four patients. Improvement of ROM of thumb abduction and extension was markedly noted in all patients. All patients returned to their routine work without any pain or discomfort. Thereafter, during the 18-month follow-up period, no patients reported recurrence of signs and symptoms.

CONCLUSION: This study presents nonsurgical OPD base Ayurveda management in De Quervain's disease without any side effects. This case series gives new scope for definite minimal invasive treatment for De Quervain's disease.

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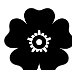
159. Ganatra, Riddhi & Joshi, Foram & Dudhamal, Tukaram. (2023). Agnikarma and Dashamoola Kwatha in the Management of De Quervain's Tenosynovitis – Case Series. AYUHOM. 10. 148-152. 10.4103/AYUHOM.AYUHOM_15_23.
https://www.researchgate.net/publication/376986700_Agnikarma_and_Dashamoola_Kwatha_in_the_Management_of_De_Quervain's_Tenosynovitis_-_Case_Series



Limitation of *Jalauka* (medicinal leech) application in the prevention of recurrence of keloid: a case report[160]

CASE DESCRIPTION: A 38 year old male patient had complaints of painful swelling on the right side of the scapular region for 7 days associated with mild body aches. The swelling has been present since the last month. The patient had an addiction to chewing tobacco.

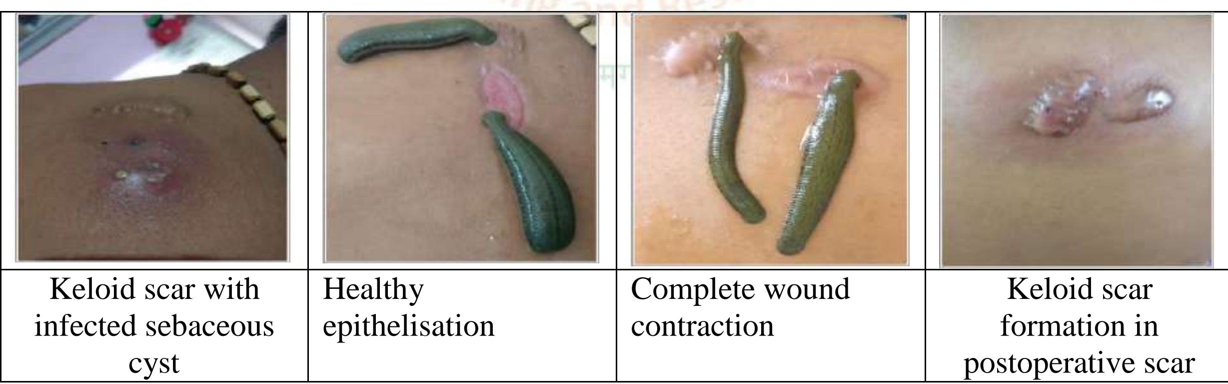
ON EXAMINATION: Approximately 2 cm × 2 cm swelling at the right side of the back (right scapular region) was noted, with peripheral redness and punctum at the centre. Mild, thick purulent discharge from the punctum was observed. On palpation there was mild tenderness, non-reducible swelling, negative pinch test, and absent lymphadenopathy. No abnormality was found during other systemic examinations. Besides swelling, there was a hypertrophic keloid scar due to previous surgery of sebaceous cyst excision associated with regional itching.

INVESTIGATION: Ultrasonography examination revealed a well-defined 2.5 cm × 2.2 cm-sized heterogeneous hypo-echoic lesion in the right scapular region's deep subcutaneous plane over the back. The lesion was anterior to the muscle plane and showed posterior acoustic enhancement. On the Color Doppler examination, no internal vascularity was reported. There was minimal inflammation of the surrounding fat. These findings are suggestive of sebaceous cyst with minimal inflammatory changes. The findings of the haematological analysis were within the normal range. Based on this, the diagnosis of an infected sebaceous cyst was confirmed.

THERAPEUTIC INTERVENTION: As the patient tended to keloid formation, surgical excision of the cyst followed by medicinal leech application therapy was planned. Excision of the cyst under local anaesthesia was done. After excision, medicinal leech application was performed on the postoperative wound once weekly for five sittings. Daily dressing of the wound with *Jatyadi Taila* after cleaning with normal saline was done. The oral medicines administered during the postoperative period include amoxicillin (500 mg—2 times a day), clavulanic acid (125 mg—2 times a day) tablets, and paracetamol tablets (500 mg—3 times a day) orally for 5 days.

RESULT: A shiny scar with firm spreading and irregular margins was formed in the second month of follow-up, suggesting the keloid formation in that scar. Further, a complete keloid formation with typical shiny skin and firm, irregular margins as previous postoperative scar, and keloid was noted by the end of 4 months.

CONCLUSION: Medicinal leech therapy helps manage cases of keloid; however, there are chances of recurrence. A multi model therapeutic approach with *Panchakarma* and internal medication may help overcome this limitation.



Keloid scar with infected sebaceous cyst	Healthy epithelisation	Complete wound contraction	Keloid scar formation in postoperative scar

160. Sonani S, Patel PS, Dudhamal TS. Limitation of *Jalauka* (medicinal leech) application in the prevention of recurrence of keloid: A case report. J Ras Ayurvedic Sci 2023;7:125-9. [ISSN: p-2456-5601, e-2581-9895] DOI:10.4103/jras.jras_145_22 www.jrasccras.com
https://www.researchgate.net/publication/327228173_ROLE_OF_JALAUKA_LEECH_THERAPY_IN_THE_MANAGEMENT_OF_KELOID-A_CASE_REPORT

Jalaukāvacaraṇa (hirudo therapy) in the management of necrosed index finger due to crush injury[161]

CASE DESCRIPTION: A 40-year-old male patient had a complaint of severe pain & swelling at the index finger of the right hand. He was having difficulty in moving his index finger & disturbed sleep owing to severe pain in the index finger. The patient reported that onset of this injury resulted from a crushed injury before 1 month at his work place. There was no significant systemic disease noted in the family which was relevant for influencing the recovery of his related problem. He did not have any addiction history except for tea habituation. Previously he had undergone some sorts of treatment in a super specialty center at civil hospital in Ahmadabad, & was prescribed medications like tablet pentoxifylline 400 mg 1 BD, tablet cilostazol 50 mg 2 BD, tablet acetylsalicylic acid 150 mg 1 BD, tablet ibuprofen 400 mg 1 TDS, & tablet pantoprazole 40 mg 1 BD. The patient had taken the medications for the last 20 days, without any relief, especially for the pain that causes disturbed sleep for him, & finally, he was advised to undergo amputation.

ON EXAMINATION: Local finding showed blackish discoloration (necrotic changes) and inflammation on the tip of the index finger and nail bed. On palpation, local tenderness and mild temperature were felt, while movement of the index finger was restricted and painful.

INVESTIGATION: X-Ray of the palm was done and report showed no evidence of fracture and there was only soft-tissue edema in the terminal finger. Routine blood examinations were carried out and found within normal range.

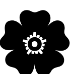
THERAPEUTIC INTERVENTION: *Jalaukāvacaraṇa* (hirudo therapy) is a para surgical procedure and applied in this case for six times till the completion of his treatment.

RESULT: The finger became normal, without any deformity and without the need for amputation. The finger looked normal after removal of the necrosed part and normal tissue regeneration.

CONCLUSION: J*alaukāvacaraṇa* (hirudo therapy) is a safe, effective, easy-to-apply, parasurgical & non-invasive procedure in the management of necrosis due to crush injury. These types of procedures need further study in larger populations & in collaboration with vascular surgeons in multispecialty centers to save patients from amputations.

Necrosed index fingertip at first consultation in the outpatient department	*Jalaukāvacaraṇa* (applied three leeches) at the index finger	After 1 month (sixth sitting) with normal finger

161. Dudhamal TS., Sudarmi K. *Jalaukāvacaran.a* (Hirudo therapy) in the management of necrosed index finger due to crush injury. Ancient Sci Life 2018;38:68-72. [ISSN p-0257-7941, e- 2249-9547] DOI: 10.4103/asl.ASL_163_16 www.ancientscienceoflife.org
https://go.gale.com/ps/i.do?id=GALE%7CA757471963&sid=sitemap&v=2.1&it=r&p=AONE&sw=w&userGroupName=anon%7E6be2330f&aty=open-web-entry



Management of pre-operative anxiety through Ayurveda drug-case series[162]

CASE DESCRIPTION:

CASE 1: 47 year old male patient posted for planned surgery. During preoperative preparation, patient was found very anxious about procedure as well about recurrence of perianal abscess or fistula-in-ano. Adding to this, his general hyperactive behaviour also depicted moderate level of preoperative anxiety. On preoperative assessment, anxiety score (measured by APAIS/The Amsterdam preoperative anxiety and information scale) was found to be 12 (Information desired anxiety-4; surgery related anxiety-6) and by Hamilton anxiety score (HAS) it was found to be 18.

CASE 2: 35 year old male patient posted for the planned surgical procedure for the management of 3rd grade haemorrhoids. Patient was suffering from this compliant since 6 year so he was very frustrated about the present condition and didn't want to suffer this condition again in future. Blood pressure and respiration rate of 140/90 mm of Hg and 22 per minute respectively before operation was indicative of anxious clinical picture (normal range being 110/80 mm of Hg and 18/min respectively).. APAIS score was 15 and Hamilton anxiety rating was 22.

CASE 3: 21year old female patient was planned for operative procedure of hemorrhoids found to be severely anxious due to fear of surgery APAIS score was 17, Hamilton anxiety rating was 20 and Vitals were also altered: BP-130/80, respiratory rate-26/min, & pulse rate-88/min.

THERAPEUTIC INTERVENTION: All Patients were prescribed 2 doses of *Bramhyadi* tablet (500 mg) at night on the day before operation, & in the morning on the same day of operation. As all three operative were planned for operative under spinal anesthesia (Sadal block) and patient was kept NBM (Nil by mouth), morning dose of the drug was given with a sip of water only with the permission of anesthetic doctor.

RESULT: Among three patients only one patient complained of insomnia, other 2 patient's sleep was not disturbed. Blood pressure was altered in two patients, which was settled to normal on day of operation. Tachycardia was noted in only one patient (Case 3), but on operative day it was found to be normal, although showed slight variations. Respiratory rate was also found to be much normal on the day of operative in all three patient. General attitude also became too calm and relaxed irrespective of various medical events going around them. They were all found to be mighty to tackle such kind of threatening events. Symptomatic severity was also seen decreasing as per APAIS and Hamilton anxiety rating. Anxiety was caused by threat of procedure in two patients and in one patient, it was caused by bad memory of past operative procedure and fear of recurrence. By assessing post-operative recovery time, it was observed that there was not too much delay in all the three patients.

CONCLUSION: In these patients, *Bramhyadi* tablet along with counselling had a positive influence to the preoperative anxiety looking at the reduced score on the anxiety scale, normal vital parameters and general attitude-behaviour of the patient. Together with supportive evidence of the literature, daily use and implementation in practice, its use is recommended in particular in anxious patients before clinical trial. For patients with contraindications to benzodiazepines it would be a good alternative.

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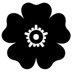
162. Sonani SR, Dudhamal TS. Management of Pre-Operative Anxiety Through Ayurveda Drug- Case Series. International Journal of Ayurveda and Pharma Research. 2022;10 (2):36-40. https://doi.org/10.47070/ijapr.v10iSuppl2.2533
https://www.researchgate.net/publication/365583211_Management_of_Pre-Operative_Anxiety_Through_Ayurveda_Drug-_Case_Series



Jalaukavacharana (Leech application): para-surgical approach to Shlipada (filariasis): a pilot study[163]

PURPOSE: The present paper indicates the effectiveness of *Jalaukavacharana* or medicinal leech therapy in *Shlipada* or Filariasis.

MATERIAL & METHODS:

STUDY DESIGN: This is a pilot study on 13 patients of *Shlipada* or filariasis taken from outpatient departments of hospitals, and dispensaries irrespective of their age, gender and religion.

CRITERIA FOR SELECTION: The diagnosed patients of *Shlipada* were grouped into two categories duly based on their clinical findings.

GROUP 1: It consisted of patients presenting with the signs and symptoms of itching, slight redness, inflammation, and non-pitting oedema examined by putting pressure on the affected part (the depth of the depression formed being recorded in square cm).

GROUP 2: This category consisted of patients with hard swelling, hairiness, nodules on the lesions, and pitting edema (measurement recorded in square cm before the treatment).

PROCEDURE OF LEECH APPLICATION: Patient was laid down comfortably in supine position and leech was applied at the site of lesion. When it started sucking blood the *Jalauka* was then covered with fine white wet cloth except the mouth. After completion of the procedure dusting of *Sphatika* was done in cases of oozing. Dressing at the bite site was done with *Shatadhauta Ghrita*. Patient was observed for one hour in the recovery room.

RESULTS: The area of swelling began to reduce even after one sitting of leech application in 1st group of patients, whereas inflammation was locally reduced after 3-4 sitting. The complete cure of symptoms in 1st group of patients took around 10 to 15 sittings. About 40% relief was obtained in 2nd group of patients after continuing the treatment for 20 sitting within 6 weeks.

The chronicity with change of tissue structure plays an important role regarding the cause of the disease. In one sitting a minimum of 5 and maximum of 10 leeches were applied as per the severity of the symptoms. The total quantity of blood expelled from one *Shlipada* case at one sitting varied within 80 to 100 ml without any untoward effect. In this pilot study out of 13 cases treated with leech application, 8 cases showed significant relieve in sign and symptoms with complete reduction of swelling; whereas 3 cases showed 40% relief, and in rest 2 cases improvement in the symptoms was recorded.

CONCLUSION: This para-surgical approach i.e. leech application is beneficial to the patient suffering from *Shlipada*. None of the patients complained of any adverse effect after leech application. No recurrence was observed with follow-up period of six months. So no doubt; it is the effective and encouraging; non-pharmacological and para-surgical modality for management of *Shlipada*.

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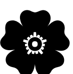
163. Chatrubhuja Bhuyan, T.S. Dudhamal, S.K. Gupta; Jalaukavacharan (Leech Application): Para-Surgical Approach to Shlipada (Fileriasis): A Pilot Study; Indian Journal of Ancient Medicine and Yoga; Volume 5 Number 3, July - September 2012;
https://www.researchgate.net/publication/277576848_Jalaukavacharan_Leech_Application_Para-Surgical_Approach_to_Shlipada_Fileriasis_A_Pilot_Study/citations



Guduchi fibres (Tinospora cordifolia Linn.) as a skin suturing material-a controlled clinical trial[164]

PURPOSE: To study the feasibility of *Guduchi* fibres as skin suturing material.

MATERIAL AND METHODS:

STUDY DESIGN: The study is an open labelled randomized, prospective, parallel and comparative clinical trial done in 60 patients of post-operative minor surgery and post trauma patients.

INCLUSION CRITERIA: Patients of age 10-60 years of either gender with traumatic wounds e.g. incised wound up to 7cm x1cmx1cm or minor surgery wounds e.g. excision of sebaceous cyst, lipoma, ganglion etc. over any part of the body including joints were included in the study.

EXCLUSION CRITERIA: The wounds associated with DM, Tuberculosis, infection, avulsed wounds, stabbed wounds were excluded. The positive cases of HIV, VDRL, and HBsAg were also excluded.

GROUPING AND POSOLOGY: They were divided into two groups group-A (n=30, trial group) and group-B (n=30, control group). Duration of treatment ranged b/w 7-10days. Follow up of the patients was carried out after one week from the day of suture removal.

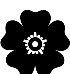
PREPARATION OF GUDUCHI SUTURES: Fibers were extracted according to the present methods used for plant fiber extraction. The mature *Guduchi* stems were collected and then dipped in water at room temperature for wet retting, thereafter manual extraction of fibers were done. Fibers obtained were autoclaved. Maximum length of single filament obtained was 120cm. In routine, average length yield was about 25-50 cm. Diameter of fibers obtained was 0.15mm. Fibers were creamish white/pale white in colour and smooth in texture. Tensile strength of single filaments include breaking load (N)=15.1 Newton and elongation (%) 16.6% measured using Instron.

RESULT: In trial group out of 30 patients, in 18 patients sutures were removed on 7th day while in control group, in 25 patients sutures were removed on 7th day. In 7 patients of trial group and 1 patient of control group sutures were removed on 8th day. In 6 patients of trial group and 3 patients of control group sutures were removed on 9th day. In 1 patient of control group sutures were removed on 10th day.

CONCLUSION: *Guduchi* fiber can be used as an alternative for cotton thread in skin closure as it is cost effective, facilitate easy handling, exhibit good knot security, maintain optimum tensile strength, less scar and less tissue reaction compared to cotton thread.

Trial Group	Control Group

164. Monica Shrestha, Jagdhane CD, Dudhamal TS. Guduchi fibres (*Tinospora cordifolia* Linn.) as a skin suturing material - A Controlled Clinical Trial. Ayurline: IJRIM International Journal of Research in Indian Medicine April-June 2017;1(2): 47-54. [e-ISSN: 2456-4435] www.ayurline.in https://www.researchgate.net/publication/318969540_International_Journal_of_Research_in_Indian_Medicine_Guduchi_fibres_Tinospora_cordifolia_Linn_as_a_skin_suturing_material-A_Controlled_Clinical_Trial



Agnikarma with *Kshaudra* (honey) along with adjuvant *Ayurveda* therapy in the management of trigger finger-a single Ayurveda case report[165]

CASE DESCRIPTION: A 71 year old retired male plumber (due to nature of work, where there was overuse of fingers) presented with 2 year history of gradual progressive painful locking of the middle finger of the left hand. The patient also complained of early morning stiffness and swelling over the base of the left middle finger. Symptoms were aggravated by repetitive finger movements and relieved after coconut oil massage on it. The patient had a history of cerebrovascular accident before 5 years. The patient is a known case of hypertension for 5 years and taking antihypertensive medication, i.e. telimet 40.

ON EXAMINATION: Swelling (Grade II) was noted on the left middle finger. The patient demonstrated active flexion of the middle finger leading to the locking of the left-hand middle finger at the MCP and PIP joint. Passive extension of the finger was done by the patient with another hand. Other fingers of the hand were having normal function. On palpation, tenderness (Grade II) and a small palpable nodule were noted over the flexor tendon sheath at the MCP joint and PIP joint in the left middle finger. Sensory and motor examinations of both hands were normal. On the basis of clinical examination, the patient was diagnosed with a TF (Grade III severity according to Green's classification).

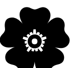
THERAPEUTIC INTERVENTION: The patient was treated with 30 sittings of *Kshaudra Agnikarma* on regular basis in the morning for 1 month along with *Bandhana* in the form of a TF splint advised for 2 months. Oral medications of *Dashamoola Kwatha* 20 ml per day in empty stomach twice daily and *Haritaki Churna* (*Terminalia chebula* Retz.) 5 g at bedtime with lukewarm water were also given.

RESULT: The swelling was completely reduced after 5 days of intervention. Pain and tenderness subsequently reduced day-by-day, and after 7 sittings of *Agnikarma,* tenderness grade became 0 from Grade II. Stiffness of the middle finger decreased gradually every day and it was completely diminished after 10 sittings of *Agnikarma*. The patient was able to actively extend the finger without support of another hand after 13 sittings of *Agnikarma*. After completion of 30 sittings of *Kshaudra Agnikarma*, it was noted that the patient could occasionally lock the left middle finger. At the end of treatment the patient attained Grade I according to Green's classification for assessment of TF. On a follow-up observation after 9 months, the patient was found to have no pain and no locking of the middle finger.

CONCLUSION: Both *Agnikarma* and *Bandhana* are safe and effective nonsurgical therapeutic interventions, and along with oral Ayurvedic medicines show tremendous result in the management of TF.

Before Treatment	*Kshaudra Agnikarma*	After Treatment

165. Ganatra RJ, Dudhamal TS. *Agnikarma* with *Kshaudra* (honey) along with adjuvant *Ayurveda* therapy in the management of trigger finger - A single case report. AYU 2021;42:164-8. [ISSN: p-0974-8520 e-0976-9382] DOI: 10.4103/ayu.ayu_299_21 www.ayujournal.org
https://pubmed.ncbi.nlm.nih.gov/37347081/



Case report: "Management of urethral stricture with Uttara Basti"[166]

CASE DESCRIPTION: A 25 year old male patient, of *Vatapitta Prakriti*, had complaints of dysuria, dribbling micturition, slow stream of urine, incomplete emptying of bladder leading to fullness of bladder, increased frequency of micturition and cystitis.
Past history revealed that he had undergone circumcision for Phimosis related symptoms in January 2004. Afterwards he suffered from recurrence of some symptoms like straining and dribbling during micturition, for which he underwent Direct Visualized Urethrotomy (DVIU) on 22.03.2004.

ON EXAMINATION: Local genital examination showed scar of circumcision on corona of the penis (fore skin of prepuce was excised).

INVESTIGATION: A Retrograde Urogram was done, in which findings were suggestive of the urethral stricture at membranous urethra. Urine flow rate (urine output/min.) was measured manually pre and post treatment. It was observed that urine flow rate was increased after completion of the treatment. Retrograde urethragraphy was done before and after the treatment for comparison of result. It showed increase in the caliber of urethral lumen in the membranous part of urethra.
THERAPEUTIC INTERVENTION: After empting urinary bladder, painting of penile region with betadine antiseptic solution was done and then instilled 2% xylocaine jelly into the urethra. With the help of disposable feeding tube of no. 9, a mixture of autoclaved sesame oil (15 mili-litre), honey (4 mili-litre) and rock salt (1 gram) was pushed into the urethra and retained for 10 minutes once daily.

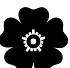
RESULT:

Investigations	Before treatment	After treatment
TLC	1 5600/cu. mm	5300/cu. Mm
Hb%	10.5gm%	10.5gm%
Blood urea	27 mg/dl	27mg/dl
Urine Sugar	Nil	Nil
Urine microscopic	Pus cells 6-10/ hpf	Pus cells- nil
Serum creatinine	0.8mg/dl	0.8mg/dl
X-ray KUB	NAD	NAD
Urethrogram	Stricture at prostatic urethra (narrowing of lumen)	Lumen was increased
USG Abdomen & Pelvis	Irregular bladder wall with cystitis	Bladder wall normal, no cystitis (normal USG)

The stream of urination was quite well and passing without straining. Complete emptying of the bladder was found. After completion of the treatment course of two sittings (i.e. after two months) patient was cured completely. There were no adverse effect or complication found during the treatment.

CONCLUSION:
As it is single study, it requires more number of patients and long follow up for significant conclusions to be drawn.

166. Dudhamal TS, Gupta SK, Bhuyan C. Case report: "Management of urethral stricture with Uttara Basti". *Anc SciLife*.2010;30(2):5153. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3336278/#:~:text=A%20case%20of%20stricture%20of,remarkable%20improvement%20in%20his%20condition.



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