



Review Article

ROLE OF APAMARGA KSHARA IN CURRENT CLINICAL PRACTICE

Manmahendra^{1*}, Shailendra Singh¹, Rekha Jatav², P. Hemantha Kumar³

¹PhD Scholar, Department of Shalya Tantra, ²PG Scholar, Department of Kaya Chikitsa, ³Professor, National Institute of Ayurveda, deemed to be University, Jaipur, Rajasthan, India.

Article info

Article History:

Received: 14-05-2023

Revised: 01-06-2023

Accepted: 16-06-2023

KEYWORDS:

*Apamarga
Kshara, Chedan,
Bhedan, Lekhan,
Shoshan, Kshara
Chikitsa.*

ABSTRACT

Ayurveda is Indian traditional medical system, in which herbal, mineral and animal products are used for treatment of disease. In which, *Shalya Tantra* is branch of Ayurveda in *Astanga Ayurveda*. *Shalya Tantra* field is deal with medical as well as surgical conditions. *Sushrut Samhia* is oldest and important text in field of *Shalya Tantra* written by *Acharya Sushruta*.

In *Shalya tantra* sphere ample of treatment options available, In which *Kshara Chikitsa* very important part of Ayurveda medical field. *Acharya Susshrut* and *Vabhagvat* have saying, *Kshara Chikitsa* is best treatment compare to others Ayurveda therapy (*Agnikarma* and *Raktamokshan*) because of multiple mode of actions describe of *Apamarga Kshara*. *Acharya Sushruta* describe this property of *Apamarga Kshara* e.g., *Chedan, Bhedan, Lekhan, Shoshan* and suppress of three *Doshas*. In Current era lot of surgeons and clinician used of *Kshara* in External and internal intervention as per indication of Text. In this review article we are collect of all published data based on evidence based clinical practice. In which search strategy, include all clinical trials and case report published in below mentioned authentic search engine. All literature collects from Google Scholar, PubMed and Cochrane library. Aim of this literature review update of all researchers and clinicians regarding to *Kshara Chikitsa* and new development of infield *Kshara Karma*.

INTRODUCTION

In Ayurveda *Sushruta Samhita* devoted for *Shalya Tantra* (surgery) written by *Acharya Sushruta*. In definition of *Shalya Tantra*, ample of treatment modalities describe for removal of *Shalya*. In which, *Kshara Karma* is presently practice by Ayurvedic Surgeons for treatment of many diseases but in Ano-rectal Practice *Kshara Karma* more popular on global platform under the heading of medicated seton^[1,2]. Many authors describe of *Kshara Sutra* as medicated seton used in treatment of cryptoglandular fistula in ano. In present time *Kshara Karma* very popular technique use in different condition. Aim of this manuscript describe the role of *Apamarga Kshara* in current clinical practice and gather of all data available on authentic search engines (Google Scholar, PubMed and Cochrane Library) from 2010 to 2023.

MATERIAL AND METHOD

Authentic search engine used for collecting of clinical data for this manuscript. First, we are search of Keyword "*Apamarga Kshara*" in search bar, total 14 Result was showing on screen on PubMed and 639 in Google Scholar. We collect only clinical trials study, case series and case report in this manuscript. Aim of this manuscript update to scholars and researcher in Ayurveda field for gaining of current clinical knowledge and new indication regarding to *Apamarga Kshara* other than classical texts indications.^[3,4]

Preparation Modalities of Apamarga Kshara

In Ayurveda classical text, *Sushruta Samhita* mentioned of difference preparation form of *Apamarga kshara* based on application site. The Most popular preparation of which are the following e.g. *Ksharasutra, Kshara Powder, Kshara Jala, Kshara Pichu, Kshara Taila*^[5] and *Kshara Vrti*.^[6] *Kshara Jala* is fundamental preparation of others (mentioned above) preparation but less self-life expectancy and difficulty to application so over counter this problem *Kshara cream* and ointment coming to clinical practice.

Access this article online

Quick Response Code



<https://doi.org/10.47070/ijapr.v11i6.2839>

Published by Mahadev Publications (Regd.)
publication licensed under a Creative
Commons Attribution-NonCommercial-
ShareAlike 4.0 International (CC BY-NC-SA 4.0)

Pharmaceutical analysis of Apamarga Kshara^[7]

Pharmaceutical study of *Apamarga Kshara* showing following properties on drying at 110°C: 7.25% w/w, pH of 5% by litmus: 10, Ash value: 67.75% w/w, and water-soluble extract: 78% w/w. Organoleptic characters are showing Smooth, Dull white and Alkaline test. Chemical composition of *Apamarga Khara* Mentioned in Table 1.

Table 1 Quantitative Estimation of Apamarga Kshara

Chemical Position	Range Quantity (% w/w)
Magnesium	0.092 - 1.045
Sodium	1.000 - 28.844
Potassium	0.05 - 30.54
Chloride	15.09 - 19.81
Carbonate	13.92% - 25.583
Sulfate	2.4755 - 21.280
Calcium	1.685 - 3.5185
Phosphate	>4.211% w/w
Iron	>0.263w
Moisture	< 1.414% w/w
pH value	10.1 - 11.8

Preparation Method of Apamarga Kshara

Apamarga Panchanga (whole plant) raw drug collect from authenticate source. Dry and burn to *Apamarga Panchanga*, then ash put on large iron pan. The ash of *Apamarga* heat up-to achieve of grey colored ash, which is devoid of mud, stones and charcoal. Ash is mixed in 6 time tap water left 24 hours after proper stirring. The next day, only the supernatant fluid separate, discarding the dark-colored sediment in another bucket. The supernatant fluid thus obtains filter 21 times using a cotton cloth to obtained *Gaumutra Varna Kshara Jala* up-to 21 days (each filtration per day). This *Kshara Jala* heat over an iron pan in mild- moderate flame with intermittent stirring for about 3 hours till it turned to reddish-yellow (*Ishat Raktavarna*). When the *Ishat Raktavarna* is attained then it is called as *Mrudu Kshara*. *Sankhanaabhi* (*Shukti*) weighing about 1/10th part of *Apamarga* ash obtain and heat red hot in an iron pan. Once it was red hot, *Pottali* of it prepare. *Pottali* of *Shukti* dipped in *Mrudu Kshara*. Then *Mrudu Kshara* turned into white colour and heated on the moderate flame and stirred continuously till it became thick in consistency. This is called as *Madhyama Kshara*. *Chitrakamula* weighing about 1/10th part of *Shukti* collect. The *Chitrakamula* was finely paste and keep ready. The *Madhyama Kshara* put off from the flame, allowed to cool for 5-10 minutes and then finely pasted *Chitrakamula Kalka* adding and stirred for its uniform distribution. The *Kshara* thus obtained is *Tikshana*

Apamarga Kshara. This *Kshara* now ready for application^[8].

Application of Apamarga Kshara

Kshara Karma Therapy is very useful in different clinical condition mentioned by *Acharaya Sushrut*. In classical texts *Kshara* is classified in two categories based on application of *Kshara* that is *Antaparimarjan* (*Paniya Kshara*) and *Bahriparimarjan* (*Pratisarniya*) used as oral and local application. In this manuscript we are mainly focus on application of *Pratisarniya Kshara* (external use) because *Paniya Kshara* mostly used in *Kayachikitsa* (medicine) department.

Abhayantar Arsha (Hemorrhoid)

After proper effect of anesthesia patient taken on OT table in lithotomy position and clinically assessing of pile mass. After painting and draping, pile masses visualize and reassess for their number, position and size with normal proctoscope, one pile mass at a time was selected for *Kshara* application. Then Slit Proctoscope inserted into anal orifice and proper visualized of hemorrhoid at slit part of proctoscope, if skin present on this slit part, retract of this skin by allies' forceps. After that *Apamarga Kshara* applies with the help of spatula on hemorrhoid tissue properly and waits 100 *Matrakal* (approximate 1-2 minutes). The opening of proctoscope was covered by cotton swab to prevent direct air contact so that *Kshara* can work fast and was keep till *Pakva Jambu Phala Varna* (blue-black color) was observed, *Kshara* was washed out with normal saline followed by lemon juice, and the anal canal clean. Thereafter antiseptic bandage doing. In follow-up period 15-20ml of *Yashtimadhu Ghrita* (*Matra Basti*) push inside the anal canal for lubrication as well as to prevent burning sensation.^[9,10]

Gudabransha (Rectal Prolapse)

After completing of pre-operative measure of surgery protocol, first reduce of rectal part by manually at normal position of rectum mucosa. Then lubricated slit proctoscope introduced into anal canal and visualized of lumen properly. Application of *Apamarga Pratisaraneeya Kshara* on the anal and rectal mucosa circumferentially extending from the mucocutaneous junction outside to 1cm above the ano-rectal junction. After 100 seconds the part applied with *Kshara* becomes dark (*Pakva Jambuphala Sadrisha*) and then it was gently washed with lemon Juice (fresh lemon juice). The same procedure was repeated circumferentially until all the anal mucosa was applied. Anal pack of gauze soaked with *Yashtimadhu Ghrita* (*Glycyrrhiza Glabra* chief ingredient). Dressing the wound done and the patient shifted to Recovery ward.^[11] In follow, up period *Madhuyathi Ghrita Matrabasti* advised up-to 15 days and *Changeri Ghrit* (15ml) also Advised Orally with Luke warm water.

Nadivrana (Pilonidal Sinus)

Acharya *Sushruta* classically mentioned of *Kshara Sutra* in *Nadivrana* in *Chikitsa Sthan*. In *Nadivrana* (Pilonidal Sinus) two types *Kshara* therapy used, first application of *Apamarga Kshara* After excision and incision. Indication of *Kshara* in PNS case working as *Dushta Vrana*. In post-operative period *Apamarga Kshara* also used with dressing material if slough is present in wound.

Another application is *Kshara Sutra* inserted into track with help of probing. When cavity, ramification and immature track present *Apamarga Kshara* should be apply. *Kshara Sutra* is indicated in condition of Mature track is present in pilonidal sinus.^[12]

Dushta Vrana (Non-Healing Ulcer)

Apamarga Kshara brings a property of *Lekhana*, *Chedhan*, *Bhedan* and *Shoshan*. This all properties are important role play in *Dushta Vrana* treatment so *Apamarga Kshara* work as a *Shodhan* and *Ropan* agent in *Dushta Vrana*. *Apamarga Kshara* and *Apamarga kshara Sutra* are effective in many surgical diseases for complete cure. *Kshara* is more effective in *Kapha Dosha*. Acharya *Sushruta* has mentioned that *Kshara* should be administered by an intelligent and skilled *Shalya Chikitsaka* (surgeon) to subside most troublesome and all serious diseases rapidly in which *Kshara* is indicated^[13,14].

Nasa Arsha (Nasal Polyp)

Nasal polyp is long-lasting inflammatory process, present in 1-4% general population. Before starting of procedure proper assess of nasal cavity and other pathology. The nasal cavity visualizes with help Thudicum's Nasal Speculum and a secretion over the turbinate wipe out using gauze sterile piece. *Apamarga Kshara* was applied over the medial surface of the exposed turbinate, by using the cotton rolled over Jobson probe. Applied *Apamarga Kshara* was kept on same time mentioned in above procedure. Following steps are same remaining *Matrabasti*.^[15]

Mucocele

Patient was made to sit comfortably then cleaned the area of the Mucocele with sterile gauze and the lip was pulled outward and downward with left hand. By the right hand *Apamarga Kshara* Applying on the Mucocele with the help of *Shalaka*, it wipes after 100 *Matra kala* (2 minutes). Mucocele area completely burnt by leaving behind a clean wound of *Jambuphala Varna* (colour of *Syzizium cumini* Linn. fruit) Then the *Kshara* was wiped-out using gauze piece dipped in *Nimbu Swarasa*. Later on, sterile gauze was kept on the site for 30 minutes. Patient was asked to gargle with *Triphala Kashaya* twice daily and not to take hard food articles. The scar mark completely disappeared in seven days^[16].

Wart and corn

Corn is abnormal skin tissue growth of keratinized tissue and wart is viral infection of planter sole due to unhygienic condition. *Apamarga Kshara* is effective role play in wart and corn as it scraps the abnormal tissues. The abnormal keratin deposition in wart and corn is destroyed by *Kshara*, thus normal skin is retained.^[17,18]

Shalaky Tantra (ENT)

Apart from above indication another clinical indication is present in *Shalaky* disease. Now here we are showing some new indication based on published data. *Apamarga Kshara* apply on SOL (space occupy lesion) present on cutaneous part after excision of SOL. It is indicated in Keloid after excision, it is preventing of reoccurrence of disease. Some clinician uses Direct application on Gingival Hyperplasia, lesion regressed within 3 sitting. Another same procedure applied on ethmoid poly and mucocele.^[19]

Kayachikitsa (Medicine)

Acharya *Charak* Also mentioned of indication of *Apamrga Kshara* in different chapter but specific condition given in for *Kushtha Chikitsa* (skin disease). One clinical study also publishes on clinical efficacy of *Apamrga Kshara* in *Switra* (vitiligo) disease. Clinically as well as statistically effective on color, number of patches and size.^[20]

Others Use

Apart from mentioned indication, another following indication of *Apamarga Kshara* external abscess^[21], *Nasa Arsha*,^[22] cervical erosion (*Karnini Yonivyapada*)^[23] hydranitis suppurativa^[24].

Application of Kshara Sutra

Kshara Sutra is modified preparation of *Apamarga Kshra* particularly used in cutting purposed of pathological deformed tissue. Globally accepted *Kshara Sutra* published in many manuscripts under the title of medicated thread. Nowadays it mainly applied in proctology area for cutting of fibrous track in fistula-in-Ano and pilonidal sinus. Another indication also mentioned in classical texts and published data available on search engines.

Fistula in Ano

Patient taken in lithotomy position on operation table after proper painting and draping, Inj 2% xylocaine was infiltrated nearby anogenital space. Reassessment of extension of tract done by probing. Probe withdraw from external opening to internal opening. Then *Kshara Sutra* tied on the on the track. In follow period *Kshara Sutra* change after week by help of road rail technique. In which cutting and healing simultaneously occurring.^[25] This technique is conventional method of *Kshara Sutra* Application, nowadays some modification coming for sphincter and tissue saving technique e.g. IFTAKE Technique, Partial

Fistulotomy with Primary threading, intercept of fistulous track followed by application of *Kshara Sutra*.

Rectal Prolapse

The operative procedure was performed under local infiltration of 1% lignocaine with adrenaline. Two stab incisions is giving at 12 and 6 o'clock position. *Kshara Sutra* Implanted into the tissue from 12 to 6 o'clock location along with reinserted of thread from 6 to 12 o'clock. Then an index finger is inserted in the anal canal and thread is assessed and tightened. A knot is tied at the 6 o'clock position. Then, local dressing doing with betadine solution and T bandage apply with rubber tube in anal canal. This procedure is considered as modified Thiersch technique by the application of *Apamarga Kshara Sutra*. In literature technique mentioned under entitled of EACKS (Encirclement of Anal Canal by *Kshara sutra*).^[26]

Nasal synechiae with *Kshara Sutra*^[27]

A long malleable metallic probe used, inserted through the inferior opening to superior opening with help of probe without creating of false passage. One probe point was threaded with *Kshara Sutra* and passed through the inferior portion of synechiae and taken through the superior portion with needle holding forceps under visualization. Then probe remove gently, so the thread applies on entire tract. Both ends of the *Kshara Sutra* knotting comfortably on the inferior aspect of synechiae.

Other Use of *Kshara Sutra*

Kshara Sutra is prepared by 21 coated medicated thread used in difference disease but basic principle is identical, cutting of track and simultaneously healing of track. Apart from mentioned above another *Kshara Sutra* application is following e.g., pilonidal sinus, excision of wart, excision of Benign Lesion and haemorrhoid ligation.^[28-30]

DISCUSSION

In Ayurveda ample of treatment modifies describe in Texts but some are used in clinical practice in current clinical practice because developing science always give to better treatment choice to community. In spite, *Kshara* therapy most popular in scientific and clinical parameter. Now Government of India also focused on traditional medicine system because lots problem occurrence due to synthetic drugs.

Kshara Therapy very useful in proctology science for ano-rectal disorders especially in fistula in ano and haemorrhoid. Big digit occurrence (success range 22%-88%)^[31], complication proposed of modern science for Surgical treatment of high anal fistula and haemorrhoid.

CONCLUSION

Kshara Therapy Minimize this occurrence and complication in medical science no any technique keeps merit and demerit of therapy so in our proposed

science also saying some contraindication and limitation of *Kshara* therapy.

REFERENCES

1. Ramesh, P. B. (2013). Anal fistula with foot extension- Treated by *kshara sutra* (medicated seton) therapy: A rare case report. *International Journal of Surgery Case Reports*, 4(7), 573-576.
2. Ramesh, P. B. (2013). Anal fistula with foot extension, Treated by *kshara sutra* (medicated seton) therapy: A rare case report. *International Journal of Surgery Case Reports*, 4(7), 573-576.
3. <http://www.ctri.nic.in/Clinicaltrials/pmaindet2.php?trialid=25079>
4. <https://trialsearch.who.int/Trial2.aspx?TrialID=CTRI/2022/05/042754>, 2022 | added to CENTRAL: 30 June 2022 | 2022 Issue 06
5. Gohil, H., Dhruve, K., & Prajapati, P. K. (2010). Role of media in the preparation of *Apamarga Ksharataila*. *AYU (An international quarterly journal of research in Ayurveda)*, 31(3), 391.
6. Tripathi, A. K., Gupta, S., & Varshney, S. (2012). Standardization Of *Kshara Pichu* (Medicated Gauze).
7. Shrestha, M., Harisha, C. R., Dudhamal, T. S., & Kanakhara, R. (2018). Comparative pharmacognostical analysis through quantitative micrometry and analytical study on *Mridu* and *Tikshna Apamarga Kshara*. *Ayu*, 39(3), 159-164. https://doi.org/10.4103/ayu.AYU_59_18
8. Jadav, H. R., Galib, R., & Prajapati, P. K. (2015). Pharmaceutical standardization of *Apamarga kshara*. *Journal of Ayurveda and integrative medicine*, 6(4), 290-294. <https://doi.org/10.4103/0975-9476.172387>
9. Shah, B., & Dudhamal, T. S. (2018). 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*, 39(4), 213-219. https://doi.org/10.4103/ayu.AYU_147_18
10. Patil, M. (2010). Clinico-Comparative Study of *Apmarga Kshara* And *Yava Kshara Lepa* In The Management of *Arsha* Wsrt II & III Degree Haemorrhoids (Doctoral dissertation).
11. Management of rectal prolapse (*Guda Bhramsa*) through *Kshara Karma* (chemical cauterisation) - a case study *Madan Bhandari, Basavaraj Chanda, Prasanna N. Rao, Gopikrishna B.J, Sahanasheela K.R, jcol*, 2019, 389-393
12. Clinical Effect of *Kshara Karma* in the Management of *Nadivrana* with Special Reference to *Pilonidal Sinus* (PNS) and Review of Literature. *Chaturbhuja Bhuyan, Tukaram Dudhamal*: <https://dx.doi.org/10.21088/ijamy.0974.6986.10117.2>

13. Joshi, F., & Dudhamal, T. (2020). Wound healing effect of Apamarga Kshara Taila and adjuvant drugs in the management of Diabetic Foot Ulcer-A Case Report. *Annals of Ayurvedic Medicine [Internet]*, 9(4), 320.
14. Manmahendra Singh, Subhashri, P. Hemantha Kumar, & Ashok Kumar. (2023). A Review on Samangadi Taila and its Effect on Wound Healing. *AYUSHDHARA*, 9(6), 88-93. <https://doi.org/10.47070/ayushdhara.v9i6.1062>
15. Vaghela, D. B. (2022). Ayurvedic Management of Nasha Arsha-A Case Report. *IJFMR-International Journal For Multidisciplinary Research*, 4(6).
16. Rathore, R., & Savrikar, S. (2017). A Comparative Study Of Physico-Chemical Characteristics Of Apamarga Kshar, Palash Kshar And Chinchu Kshar. *World Journal of Pharmaceutical Research*, 6(2), 1082-1090.
17. "Apamarga Kshara Preparation And Its Application In Different Surgical Diseases "S axena Varsha*1, S rivastava Niraj 2, Singh L3, Think India Journal Vol-22-Issue-14-Decem ber-2019,
18. Vijayshankar, B. V., Muralidhara Sharma, C. R., & Manohar, V. R. (2014). A prospective study of prathisaraneeya apamarga kshara in comparison with prathisaraneeya palasha kshara in patients with charmakeela (warts) and kadara (corns). *J Phyto*, 3(5), 330-336.
19. Raju, S. N. (2022). Kshara Karma in diseases of Shalakyta Tantra-Case Series. *Journal of Ayurveda and Integrated Medical Sciences*, 7(8), 186-190.
20. Jadav, H. R., Galib, R., & Prajapati, P. K. (2015). Clinical efficacy of Apamarga Kshara Yoga in the management of Shvitra (vitiligo). *Ayu*, 36(2), 163.
21. Savadi, B. S., Sangameshwar, H., & Kembhavi, A. (2018). The Role of Pratisarana Kshara in the management of External Abscess. *Journal of Ayurveda and Integrated Medical Sciences*, 3(05), 242-243.
22. Dharkar, N. S., Shiralkar, M. V., Varghese, J., Waghmare, A. H., & Changade, J. V. (2016). Application Of Apamarga Kshar In Nasa-Arsha (Angiactactic Nasal Polyp)-A Case Study.
23. Gupta, P., & Sharma, S. (2015). Clinical evaluation of the efficacy of kshara karma with Apamarga kshara and Jatyadi taila pichu in the Management of Cervical Erosion (Karnini Yonivyapada).
24. Kumar, C., Fathima, S. A., & Sharad, K. (2017). Management of Hydradenitis Suppurativa by Apamarga Kshara Sutra-A Case Study. *Journal of Ayurveda and Integrated Medical Sciences*, 2(05), 194-197.
25. A Clinical Study of Apamarga Kshara Sutra in the Management of Bhagandara - A Case Study Dr. Ashok Naikar¹, Dr. Vanita², Dr. C. Halli³ *Journal of Ayurveda and Integrated Medical Sciences | Jan - Feb 2021 | Vol. 6 | Issue 1*
26. Parasurgical Application of Apamarga Ksharasutra (Modified Thiersch's Technique) In The Management Of Gudabhransa (Partial Rectal Prolapse) L. D. Barik, S. K. Debnath, D. S. Sahu, D. Das and P. V. V. Prasad DOI: 10.20959/wjpr20211-19546
27. Management of nasal synechiae with Kshara Sutra - A case report Author links open overlay panelK. Sivabalaji a, Ashitha Ali a, Ashwini BN a, Anandaraman PV b, Rabinarayan Tripathy, j. jaim.2021.03.010
28. Gupta, M. L., Gupta, S. K., & Bhuyan, C. (2011). Comparative clinical evaluation of Kshara Sutra ligation and hemorrhoidectomy in Arsha (hemorrhoids). *Ayu*, 32(2), 225.
29. Ashraf, A. S., ES, M. K., & Rao, P. N. (2022). Efficacy of Kshara Sutra in the management of Charmakeela: A Case Report. *Journal of Ayurveda and Integrated Medical Sciences*, 7(1), 385-389.
30. Dwivedi, A. (2010). Management of pilonidal sinus by Kshar Sutra, a minimally invasive treatment. *International journal of Ayurveda research*, 1(2), 122.
31. Limura, E., & Giordano, P. (2015). Modern management of anal fistula. *World journal of gastroenterology*, 21(1), 12-20. <https://doi.org/10.3748/wjg.v21.i1.12>

Cite this article as:

Manmahendra, Shailendra Singh, Rekha Jatav, P. Hemantha Kumar. Role of Apamarga Kshara in Current Clinical Practice. *International Journal of Ayurveda and Pharma Research*. 2023;11(6):23-27.

<https://doi.org/10.47070/ijapr.v11i6.2839>

Source of support: Nil, Conflict of interest: None Declared

***Address for correspondence**

Dr. Manmahendra

PhD Scholar

Department of Shalya Tantra
National Institute of Ayurveda,
deemed to be University,
Jaipur, Rajasthan.

Email: manayush567@gmail.com

Ph: 9461867078

Disclaimer: IJAPR is solely owned by Mahadev Publications - dedicated to publish quality research, while every effort has been taken to verify the accuracy of the content published in our Journal. IJAPR cannot accept any responsibility or liability for the articles content which are published. The views expressed in articles by our contributing authors are not necessarily those of IJAPR editor or editorial board members.