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A Conceptual and clinical application of Kshara Karma in Anorectal Diseases

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ABSTRACT

In Ayurveda, Shastra and Anushstra Karma are described in detail. Kshara is best among Shastra and Anushastras. Two types of Kshara are there - Paneeya and Pratisarneeya. Pratisarneeya Kshara is of three types- Mridu, Madhyama and Teekshana. Kshara Karma include - Pratisarneeya Kshara application, Kshara Sutra therapy and Kshara Varti. Pratisaraniya Kshara is mainly used in wound management, various anorectal disorders such as Arsha (Haemorrhoids), kushtha, Arbuda, Dushta Nadivrana, Guda Bhramsha (Rectal prolapse). Kshara is a caustic material. It causes chemical burn on the area where it is applied. It helps in sloughing of necrosed and infected tissues. Kshara Sutra therapy is used specially in Bhagandara (Fistula in Ano), Nadivrana (Pilonidal sinus) and various benign growth of skin such as papilloma, warts etc. Kshara Varti is used in chronic non healing wounds for debridement and in sinuses or fistula in ano. Ksahra Karma has been very much effective non surgical means in the management of various disorders especially in anorectal disorders.

Key words: Anushastra, Arsha, Bhagandara, Kshara, Nadivrana, Pratisarneeya Kshara.

INTRODUCTION

Kshara is a medicine prepared from different plants explained in Ayurveda texts Sushruta Samhita, Ashtanga Hridaya and Chakrapani and others. In Ayurveda different surgical procedures have been described such as Ashtvidha Shastra Karma, Shashti Upkrama and Saptopkrama. To achieve these procedures various means/tools have been explained. Among them are - Shastra, Anushastra and Yantra. Shastra are instruments with sharp edges and Yantra are instruments which have blunt edges. These are

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used in removal of Shalya. There are two types of Shalya - Sharirika and Agantuja. [1] In Sushruta Samhita and Ashtang Hridaya parasurgical procedures are also described and emphases have been given to them. Parasurgical procedures are - Kshara Karma, Jaloukavacharana.^[2] Agnikarma and procedures are described in detail in Sutra Sthana of Sushruta Samhita and Ashtanga. Each of these procedures has its indications and contraindications. Kshara is of two types - Paneeya and Pratisarneeya. Paneeya Kshara is indicated in diseases of internal organs or should be used internally and Pratisarneeya Kshara are used externally in different diseases. [3]

Again Pratisarneeya Kshara is of three types - Mridu, Madhyama and Teekshana. Teekshana Kshara is used in Vataja, Kaphaja and Medoja Arbuda; Mridu Kshara is used in Pittaja and Raktaja Arsha. [4] Indications of Paneeya Kshara are - Arsha, Ashmari, Gulma, Udara Vikara, Ajeerna etc. wheras Pratisarneeya Kshara is indicated in Arsha, Kushta, Bhagandara, Arbuda, Granthi, Dushta Nadivrana etc. it is also indicted in Nasaarhsa, Karnarsha and Vartma Roga. [5] Plants used for Kshara preparation are - Kutaja, Palasha,

Nimba, Apamarga, Aragvadha^[6] etc. Kshara should be prepared in Sharada Ritu according to Sushruta. Sushruta has also indicated use of Kshara in Gudabramsha in Arsha Chikitsa chapter.

Kshara Sutra preaparation is not explained in Sushruta and Ashtang but it is described in Chakradatta, commentatory on Charak Samhita by Chakrapani and Ras Tarangini, [7] Ras Kamdhenu. According to Chakradatta, Kshara Sutra is prepared with the use of Snuhi Ksheera and Haridra Churna and indicated their use in Arsha and Bhagandara whereas use of Kshara in Kshara Sutra first described by Ras Kamdhenu. Sushruta has indicated use of Kshara Sutra in Nadivrana Chikitsa. Acharya Charaka indicated its use in Bhagandara. Work on Kshara Sutra has been done greatly by Prof. P. J. Deshpandey and his them. [8] Nowadays Kshara Sutra is prepared as described by Prof. P.J Deshpandey. Later it has been used by many Ayurveda surgeons and it is gaining popularity due to its efficacy in treating sinuses and fistula in ano. Kshara in modified form is used as Varti in sinuses and unhealthy wounds.

Methods

Literary review and clinical use of all forms of *Kshara* in clinical practice are described in the present article. Firstly classical review of *Kshara* has been described.

Preparation of *Pratisarneeya Kshara and Kshara Sutra*.

Basic methodology of preparation of all forms of *Kshara* is followed as described in classical literatures and some minor modifications are done presently to prepare *Pratisarneeya Kshara and Kshara Sutra*. Plants *used* for the preparation of *Kshara* are - *Apamarga*, *Plasha*, *Araqvadha*, *Snuhi* etc.

Preparation of *Pratisarneeya Kshara e.g. Teekshana Apamarga Pratisarneeya Kshara*

Materials Required

- 1. Aragvadha or Apamarga Panchanga
- 2. Container- 10 Litre
- 3. Shukti

- 4. Chitrakamoola
- 5. Air tight container

Method of Preparation^[9]

Aragvadha or Apamarga Panchanga (e.g. 10 kg) is collected and formed into a heap. The whole twig was burnt into ashes and then it was allowed to cool by itself. The whole ash is collected (1kg) and mixed with six times of water by volume and stirred well, allowed to settle overnight. Then it is filtered through double folded cotton cloth for 21 times, residue was thrown out. Amber colored filtrate is obtained. This is subjected to Mandagni Paka, when the content was reduced to 2/3rd, 100g, (1/10th of ash) of Shukti is heated red hot and then mixed with Ksharajala to dissolve it completely. Again content is reduced to 2/3rd and 10g (1/10th of Shukti) of Citrakamoola Kalka is added to the boiling Ksharajala and allowed to boil for a few more minutes, when the content attained consistency as described by Acharya Sushruta (not too liquid or too solid). Then it is removed from fire and transferred into separate air tight container with lid and stored for use. After preparation pH value of the Aragvadaadi or Apamarga Teekshna Pratisarneeya Kshara is measured. Usually pH is found to be >12. The prepared Kshara is kept in air tight container.

Preparation of *Kshara Sutra* e.g. *Apamarga Kshara Sutra*

Materials required for Kshara Sutra preparation

- 1. Apamarga Kshara
- 2. Snuhee Ksheera
- 3. Haridra Churna
- 4. Barbour's thread No. 20
- 5. Kshara Sutra cabinet

Apamarga Kshara preparation

Apamarga Panchanga is collected and burnt as whole. Ash of Apamarga is collected and mixed with 21 times weight of the ash. The Ksharajala is kept for overnight.

Next day onwards it is filtered to get *Ksharajala*. This is subjected to *Mandagni*, when the content was

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reduced to 2/3rd, 100g, (1/10 of ash) of *Shukti* is heated red hot and then mixed with *Ksharajala* to dissolve it completely and again kept for *Mandagni Paka*. All the water content is evapourated and whitish coloured *Kshara* is obtained. *Snuhi Ksheera* is collected as fresh from *Snuhi* plant. *Haridra churna* and Barbour's thread No-20 is kept ready

Steps of Kshara Sutra preparation

- Barbour's thread is applied on Kshara Sutra preparation ring. Snuhi ksheera is applied over the thread and dried. Similarly total 11 coatings of Snuhi ksheera are achieved.
- 2. Snuhi Ksheera is applied over thread again and Apamarga Kshara is applied over it with the help of gauze. This step is repeated for 7 times so that 7 coatings of Apamarga Kshara are achieved.
- 3. *Snuhi Ksheera* is applied over thread again and *Haridra Churna* is applied thereafter. It is kept for drying. This step is repeated for 3 times so as to achieve 3 coatings of *Haridra*.

After each coating on barbour's thread, it is dried and second coating is done after proper drying. The *Kshara Sutra* preparation ring is kept inside the *Kshara Sutra* cabinet.

Clinical Application of Kshara

Teekshana Pratisarneeya Kshara is widely used in anorectal conditions such as haemorrhoids, rectal prolapse, polyps, fistula in ano. Method of application of Kshara is almost similar in all kind of diseases.

Kshara in Rectal prolapse and Haemorrhoids

Poorva Karma (Preoperative Preparation)

- a) Part preparation
- b) Bowel clearance
- c) Inj. Tetanus toxoid
- d) Lignocaine sensitivity test

Materials required for Kshara application

- Teekshana Pratisarneeya Kshara
- Nimbu Swarasa or Kanji

- Slit Proctoscope
- Applicator
- Bowl and cotton swab

Pradhana Karma (Operative Procedure)

- a) Lithotomy position
- b) Anaesthesia- Local anesthesia with lignocaine 2%.
- c) After achieving local anesthesia manual anal dilatation, sufficient enough to admit four fingers is done. Slit proctoscope is introduced and skin around pile mass is pulled laterally with Allis tissue holding forceps to get a better view of haemorrhoids. The healthy anal mucosa is covered with wet cotton balls to prevent spilling of *Kshara* on it. Then *Kshara* is applied over pile mass and kept for 2 minutes. In case of rectal prolapse *Kshara* is applied over anorectal junction/ring. Then the pile mass/anorectal ring is cleaned with distilled water followed by *Nimbu Swarasa* and observed that whether the pinkish pile mass was turned to blackish (*Pakvajambu Phala Varna*). [10]

If not, *Kshara* is applied once again till the pile mass turned to blackish colour. This procedure is repeated on all the haemorrhoids. Thereafter the anal canal is packed with gauze piece soaked in *Jatyadi/Madhuyasti Taila* to prevent burning sensation and local oedema.

Post operative management (Pashchat Karma)

Patient is kept nil by mouth for 6 hours after the procedure. Packing is removed after 24 hours or till patient defecation, and 15 ml of Jatyadi/Madhuyasti Taila is administered per rectal. From next day onwards patient is advised to take sitz bath with Sphatika Bhasma after passing stool for 10-15 min twice a day and Jatyadi/Madhuyasti Taila 15 ml twice daily is pushed per rectally after sitz bath.

1. Kshara in Fistula in ano and Pilonidal sinus

Teekshana Pratisarneeya Kshara can be applied in case of fistula in ano or pilonidal sinuses.

In fistula in ano after fistulotomy *Kshara* is applied over open wound. It is kept till *Kshara Dagdha Lakshana* is observed as described earlier. Same procedure is adopted in pilonidal sinus after excision of the sinus track. Then it is wiped with distilled water and *Nimbu Swarasa* as in case of haemorrhoids.

2. *Kshara Sutra* in Fistula in ano, Pilonidal sinus and Haemorrhoids

Preoperative procedure - Same as described in *Kshara* application haemorrhoids.

Operative procedure

- a) After achieving local anesthesia with lignocaine
 2%, a copper probe is inserted from external opening to internal opening in fistula in ano.
- b) Partial fistulotomy is done.
- c) Kshara Sutra is applied at one end of probe and is taken out from other opening along with probe and knot is applied.
- d) Antiseptic dressing is done with Jatyadi Taila.
- e) In case of pilonidal sinus partial excision is done around the sinus opening. All dead tissues and hairs are removed.
- f) A copper probe is inserted along the sinus track and it taken out through a artificial opening created at distal or proximal end. Rest of the procedure is similar as in case of fistula in ano.
- g) In haemorrhoids *Kshara Sutra* is used for transfixation of pile mass base during open haemorrhoidectomy.

Postoperative management

- a) Daily sitz bath with *Tankana Bhasma/Sphutika Bhasma* is advised and antiseptic dressing with *Jatyadi Taila*.
- b) Kshara Sutra is changed weekly for 2-4 weeks as per need in case of fistula in ano and pilonidal sinus. In haemorrhoids Kshara Sutra is not changed. It gets sloughed off as the pile mass is sheds off after necrosis.
- c) After 3, 4 weeks *Kshara Sutra* is removed, wound is laid open and dressing with *Jatyadi Taila* is

continued till the wound is healed completely. In case of haemorrhoidectomy, *Jatyadi Taila* is used per rectal 5 ml twice daily after sitz bath.



Fig. 1: Kshara Karma in Arsha (Haemorrhoids)



Fig. 2: Haemorrhoidectomy with Kshara Sutra



Fig. 3: Kshara Karma in Nadivrana (Pilonidal Sinus)



Fig. 4: Kshara Sutra in Nadivrana (Pilonidal Sinus)



Fig. 5: Kshara Sutra in Bhagandara (Fistula in Ano)

DISCUSSION

Kshara is a parasurgical method of treatment which is very much effective in the management of various diseases especially in anorectal disorders. As Kshara is prepared from many drugs it has Tridosha Shamaka property. Teekshana Pratisarneeya Kshara is better than Mridu and Madhyama Kshara. After Kshara is applied in haemorrhoids it creates chemical burn of the pile mass. Later it sheds off after necrosis. Simultaneously the wound of Kshara Daghdha heals spontaneously as Kshara possess wound healing property. The wound created by Kshara completely heals within 2 weeks. No severe adverse effects are reported after the application of Kshara. But some minor effects are observed burning sensation and Sphincter spasm and they can be treated days by administering Madhuyasti Taila or Jatyadi Taila. There is no anal stricture by this therapy. But during the procedure few precautions should be taken like performing lord's anal dilatation and proper application of Kshara only on the affected site (haemorrhoids) not on the rectal mucosa. Average recovery time is 14 days. In this way Teeksna Pratisaraneeva Kshara is considered efficient in the treatment of internal haemorrhoids. The treatment modalities of hemorrhoids medical, surgical or parasurgical come under four treatment principles of Arsha (Haemorrhoids) told by Acharya Sushruta. [11] The criteria of assessing the correct potency of Pratisaraneeya Kshara are getting Jambuphalavarna of pile mass within shatamatra Kala (approximately two minute). This has been achieved here by strictly following the technique of Kshara preparation

explained by *Sushruta*. The pH value of *Teekshna Pratisarneeya Kshara* lays between12-14. The *Pratisarneeya Kshara* acts by chemical burn and necrosis of tissues and obliteration of haemorrhoidal radicles. Thereafter sloughing of haemorrhoidal mass and it causes fibrosis and scar formation. In rectal prolapsed *Kshara* is applied at anorectal ring, therefore it strengthens the anorectal ring due to cicaterization and prolapse does not occur.

Kshara Sutra in fistula and pilonidal sinus is a multistage procedure. So the patients need to visit the hospital every week; hence, the duration of treatment in the Kshara Sutra is longer. During Kshara Sutra treatment partial fistulotomy is performed to open the external opening and Kshara Sutra is placed. It gradually causes debridement and healing the wound. This procedure is less painful than other techniques of fistula management. After Kshara Sutra procedure patients can resume their work from the next day of the procedure and it doesn't affect their normal activities. Average healing in Kshara Sutra therapy is assessed by Unit cutting Time (UCT) i.e. total no days taken to cut through the track divided by initial length of Kshara Sutra in centimeters. Average UCT is 7 days.[13] During the therapy in subsequent follow up Kshara Sutra is changed and size of track is reduced. There are no major side effects of Kshara Sutra therapy. No any effect on continence. There is minimal tissue trauma as well as lesser bleeding. Minimum hospital stay and early ambulization is achieved in Kshara Sutra therapy. [14] There is very less recurrence rate.

CONCLUSION

Kshara and Kshara Sutra therapy provide adequate treatment to the anorectal diseases very effectively. Kshara and Kshara Sutra should be prepared as described in classical texts. Recurrence rate in fistula in ano is negligible as compared to conventional treatments available. These procedures are minimal painful and can be even performed without the use of anesthesia. But with the use of anesthesia its effect is achieved much conveniently.

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