

ANALYTICAL STUDY OF KSHARSUTRA AGAINST ITS THERAPEUTIC ACTION

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ABSTRACT

Ksharsutra is a therapeutic modality of Ayurveda, especially belongs the *Shalya* Tantra department of Indian ancient medical science. The application of *Ksharsutra* is associated with scraping, draining, excision, penetrating and debridement procedures which significantly improves process of healing and imparts health benefits with minimal invasion. The *Ksharsutra* can be used with the help of infant feeding tube as a day care procedure and this process does not cause any pain. *Kshara* Sutra described as superior surgical and para surgical measures amongst the other modalities of *Shalya* Tantra, where it is conducted as a sure and cost effective method of treatment for fistula-in-ano, haemorrhoids and other selected diseases. This helps to release derangements and healing of tissues by providing *Saumyata*, *Dahana*, *Tridoshaghna*, *Pachana*, *Katuka*, *Ushna*, *Darana*, *Tikshna*, *Shodhana*, *Ropana*, *Vilayana*, *Shoshana*, *Lekhana*, *Krimighna* and *Stambhana*, etc effects to them. These effects of *Ksharsutra* provide therapeutic benefits in surgical pathogenesis. It works by pressure necrosis, chemical cauterization by *kshar* (alkali) and sloughing of the tissue of the walls of the fistulous track along with adequate drainage. It leads to an easy debridement of unhealthy tissue and pus etc. and thus providing a cleaner base for the wound healing of the affected track. Present article summarizes properties and applications of various types of *Kshara* sutra and their therapeutic *importains* and indications in the management of human health prospective.

KEYWORDS: *Kshara* sutra, *Shalya* Tantra, *Saumyata*, *Dahana*.

INTRODUCTION

Kshara Sutra therapy is a minimal invasive *Ayurvedic* *Parasurgical* procedure and time-tested *Ayurvedic* technique in the management of Anorectal disorders. Though the therapy has been described in Ayurveda by *Sushruta*, *Charak* and *Vagbhata*. This technique is being practiced widely in our country and in some other countries. It has been very practical for the management of a number of ailments such as fistula-in-ano, haemorrhoids, sentinel piles, pilonidal sinus, rectal or anal polyps, warts etc.^[1] Application of *Kshara* Sutra in *Fistula-in-ano*, firstly the patient is anaesthetized with local or spinal or general anaesthesia, then a malleable probe is passed through the external opening of the fistula to the internal opening in the anal canal and probe is gently taken out through anal opening to outside along with a *Kshara* Sutra in the groove of the probe. Later both ends of the *Kshara* Sutra is tied together. The *Kshara* Sutra is replaced by a new one after an interval

of one week. The *Kshara* Sutra gradually cuts and heals the tract. Finally, the whole fistulous tract heals after cutting. It helps is cutting, curetting, draining and healing of the fistulous track, destroys and removes unhealthy tissue and promotes healing of the fistulous track due to caustic action.^[2] It controls infection by the *microbicidal* action and separation of debris and cleaning the wound.^[3] It facilitates drainage of pus in fistulous tract and help in healing. Cutting through the tissues and laying the track open.

Application of *Kshara* Sutra in Haemorrhoids, the patient is anaesthetized with local *anesthesia*. First pile mass holding with pile holding forceps and bring them out of the anal orifice, then give incision at *mucocutaneous* junction. Later slight pull exerted over the pile mass and transfixed by *Kshara* Sutra at the base. Ligated pile mass replaced inside the rectum and rectal pack with *Yastimadhu taila* or *ghrita*.^[4] Mechanism of action of *Kshara* Sutra in Haemorrhoids includes

chemical cauterization and mechanical strangulation of the blood vessel, local gangrene of the pile mass tissue, ischemic necrosis and debridement of unhealthy tissue and sloughing of the mass within 5-7 days. Healing of the resulting wound takes 10-15 days.

Application of *Kshara Sutra* in Pilonidal Sinus, patient is anaesthetized with local *anesthesia* and then a malleable probe with *Kshara Sutra* is passed through the external opening of the pilonidal sinus to the skin. Later both ends of the *Kshara Sutra* is tied together. The *Kshara Sutra* is replaced by a new one after an interval of one week.^[5] The *Kshara Sutra* gradually cuts and heals the sinus tract.

Advantages of *Kshara Sutra* Therapy

- Simple and safe para-surgical procedure.
- Cost-effective and ambulatory.
- Minimal recurrence rate.
- Systemic diseases are also undergoing this procedure.
- No surgical complications like incontinence, stenosis and stricture.

DISCUSSION

The history of medical literature available today very clearly speaks that the disease *Fistula-in-Ano* (*Bhagandara*) affects more reputations of surgeons who deals with it. There is a saying in medical world “the best way to take revenge of a surgeon is to refer him a patient of *Fistula-in-Ano*”. Thus, it is a well-known fact that in spite of the tremendous developments of modern medical science especially of surgery, the disease *Fistula-in-ano* still remains a challenging problem to the medical world.^[6] The *ano-rectal* disorders and their management has established a separate *surgico-dynamic* speciality among the various surgical disorders. The *ano-rectal* disorders have been known from the very early period of evolution to the medical science. The disease *Bhagandara* (*Fistula-in-Ano*) is said to have existed about four thousand years according to Wilson (1963) as mentioned by *Khurana* et al (1972). *Furstenbergh* et al (1964) have mentioned the method of *Apolinose* by which *Hippocrates*, the Father of modern medicine (460 BC) treated *Fistula-in-Ano*. The main limitation of treatment of *Fistula-in-ano* by conventional surgery is that even after surgical excision of the tract the recurrence rate still remains between 20-30%. Hence this disease even today stands as a challenge in front of the medical world.^[7] *Susruta's* method of thread treatment is known as *Ksharasutra* treatment as mentioned above and even today it is quite successful method in treating this difficult disease. Hippocrates named the procedure of passing the ligature along the fistulous tract as *Appolinose*. *Chandsi* and *Madrasi* treatments are known by their names only and much detail are not known about them. However, it was *Prof. P. J. Deshpandey* at Banaras Hindu University, who took the lead after ancient *Acharyas* for exploring the technique, and modified and

standardized it with the help of modern science and technology. The treatment was put to clinical trials in patient of *Bhagandara* and many scientific papers published. Apart from that, at the Department of *Shalya Shalakya*, Gujrat *Ayurved* University, Jamnagar many works done on *Kshara-sutra* treatment for the disease *Bhagandara* under the guidance of *Prof. Kulwant Singh*. Later on various other places in India and abroad started *Ksharasutra* treatment in *Bhagandara* (*Fistula-in-Ano*) and piles patients. The *Kshara-sutra* treatment is now a well- accepted *Ayurvedic* technique for treating the *ano-rectal* diseases viz. *Fistula-in-ano*, *Arshas* (Piles), *Parikartika* (Fissures with tags) etc.

The application procedures include pre, main and post procedures

1. Pre *Kshara* sutra (Pre-operative)

- The patient should be admitted in the hospital a day before operation.
- Laxative like *Panchsakara churana* is given at previous night.
- Shave and part preparation done.
- Patient is kept fasting for at least 8 hours.
- Consent of the patient in written.
- *Proctoclysis* enema 2-4 hours before the procedure.
- Injection Xylocaine sensitivity test h. Inj. *Tetenus* toxoid 1 Amp. IM.

Requirements or equipment that should be needed includes probes of different sizes, artery forceps both straight & curved, sponge holding forceps, surgical gloves assorted size and pair, scissors, towel clips, syringes, swabs, linens, *kshara* sutra and *jatyadi ghrita* or oil. All the patients were given lithotomy position for the procedure.^[8]

2. *Kshara* sutra threading procedure (Operative procedure)

Spinal *anesthesia* is induced by the *Anesthetist*. The patient is made to lie on the operation table in Lithotomy position. The perianal area is cleaned with *Savlon* and spirit followed by Betadine painting. The outer area is covered with sterile cloth, leaving the anal area open. Digital examination done to locate any induration, internal opening and to exclude other lesions. Probing is done through a malleable probe to locate the internal opening with the index finger of other hand inside the anus. If internal opening is located, the probe is pushed out through the anal verge and the track is threaded loosely by *Kshara* sutra. However, if internal opening couldn't be located it is made inside the anal canal at a point which offer least resistance to the tip of the probe. Again *Kshara* sutra threading of the track is done loosely. 10 ml. of *Jatyadi* oil is pushed inside the rectum and sterilized gauze is applied on the anus covering the external opening. T-bandage is tied to keep the dressing in proper position. Thereafter the patient is shifted to the ward.^[9]

3. Post *Kshara* sutra threading management (Post-operative procedures)

Nil orally or empty stomach for 4 hours after which give liquid diet after that to avoid any type of inconvenience. Monitor the vitals. If operation is done under spinal anaesthesia, to avoid complication give head-low position for 12 hours. *Jatyadi* oil or *ghrita* local application one time a day. Hot *sitz* bath with *panchvalkal* kwath¹⁰ 8 hourly. To avoid hard stool, give mild laxative to the patient. If pain is excessive, urinary retention occurred, it is managed accordingly.

Post *Kshara* sutra threading complications

1. Retention of urine – it has been observed that within 8 to 10 hours after ligation, some of the patients complain of retention of urine which can be tackled by frequent *sitz* bath in lukewarm *panchvalkala kwatha* or simple warm water. Catheterization is seldom required.
2. Local irritation – In some of the patients local i.e. perianal irritation is seen which needs frequent use of oil application and hot *sitz* bath etc.
3. Abscess formation – In some of the patients (especially who was suffered from *interno-external* piles), abscess formation takes place which was managed with local application of *Dashang lepa* with *Goghrita*.
4. Haemorrhage – Alarming type of haemorrhage is not a rule with *Kshara* sutra treatment.
5. However, in some of the cases slight oozing may be seen which need no special care except the usual routine line of management, viz. avoidance of hard stool and much straining during defecation.

Fallow up procedures

Kshara-sutra applied initially is kept for 7 days after which it is replaced by a fresh *Kshara*-sutra by Rail Road Technique. This procedure is repeated every week till the track completely cut through and if there is any unhealthy *granulous* tissue, it is scrapped-off during this weekly follow-up to promote a better healing.

Pathya-apathya (diet and routinely activities)

From the very first day of *Kshara* sutra threading procedure, light diet like Khichri is advised. Patient is also advised to take plenty of fluids, blend diet, green vegetables, salad and seasonal fruits. Patient is further advised to avoid spicy and fried food and not to strain during defecation.

CONCLUSION

Ksharsutra is a therapeutic modality of Ayurveda, especially belongs the *Shalya* Tantra department of Indian ancient medical science. The application of *Ksharsutra* is associated with scraping, draining, excision, penetrating and debridement procedures which significantly improves process of healing and imparts health benefits with minimal invasion. *Kshara* sutra works by pressure necrosis, chemical cauterization by *kshar* (alkali) and sloughing of the tissue of the walls of

the fistulous track along with adequate drainage. It leads to an easy debridement of unhealthy tissue and pus etc. and thus providing a cleaner base for the wound healing of the fistulous track. The *Kshara*-sutra is changed weekly so that an average pace of cutting of about 0.5-0.8 cm/week is maintained along with healing from behind. Finally, the whole track is cut through and the fistula gets healed up with minimal scarring and without any other major complication.

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