Introduction

Horse-shoe fistula definition

When a fistula forms secondary to an ischiorectal abscess, both the ischiorectal fossae may be involved. In such conditions an external opening for each side of the ischiorectal fossa may be seen with an intercommunicating track lying posterior to the anus. This is called a Horse-shoe fistula. Also, they may open posteriorly into the anal canal at the 6 o’clock position, and may be associated with a big cavity lying superior (above the levator ani). Therefore, in such a clinical feature neither Fistulotomy (‘Wanley operation’) nor ‘Ksharasutra’ treatment alone, prove useful. After going through this, we can say that there is a definite need for newer surgical innovative techniques, to tackle this challenging disease. An integral approach of ‘Fistulectomy along the arms of the Horse-shoe fistula with Ksharasutra ligation’ in the remaining track connected to the anal canal, and drainage of the postanal space abscess, proved to be very successful. We have tried the same technique with very good results. No recurrence was found in the patients during the follow-up period of three years. The given diagrammatic presentation of the plan of surgery will help to understand the procedure.

Key words: Ayurveda, Bhagandara, Fistula in ano, Ksharasutra, surgery

Abstract

Horse-shoe Fistula is a big challenge for both Modern and Ayurvedic Surgeons. We can correlate this with ‘Shambukawarta Bhagandara’ described by Sushruta. Here, fistula forms secondary to an ischiorectal abscess and both the ischiorectal fossae are involved. Also, they open posteriorly into the anal canal at the 6 o’clock position, and are associated with a big cavity lying superior (above the levator ani). Therefore, in such a clinical feature neither Fistulotomy (‘Wanley operation’) nor ‘Ksharasutra’ treatment alone, prove useful. After going through this, we can say that there is a definite need for newer surgical innovative techniques, to tackle this challenging disease. An integral approach of ‘Fistulectomy along the arms of the Horse-shoe fistula with Ksharasutra ligation’ in the remaining track connected to the anal canal, and drainage of the postanal space abscess, proved to be very successful. We have tried the same technique with very good results. No recurrence was found in the patients during the follow-up period of three years. The given diagrammatic presentation of the plan of surgery will help to understand the procedure.

Predisposing factors [Hetu]: According to modern science

Non-specific cause – include Cryptoglandular infection and Perianal abscess (The anal fistula usually originates from a perianal abscess in the intersphincteric space of the anal canal from infection of the anal gland.)

The specific causes are – Ulcerative colitis, Crohn’s disease, Tuberculosis, Pelvic inflammation, Colloid carcinoma of the rectum, HIV infection, Foreign body intrusion, Trauma, etc.[2-4] According to Ayurveda

Along with the basic non-specific causes Kririmhakshana, (exposure to various microorganisms) specially Streptococcus and E. coli is one of the cause. Certain very interesting predisposing factors are described in Ayurvedic texts, which definitely require further evaluation. They are:

1. Apathyasevana, (indulgence in unsalutary diets and habits).
2. Traumatic abrasions within the anal region due to foreign bodies or Fecolith (hard stool).
3. Over indulgence in sex.
4. Frequent Pravahana (Bacillary dysentery).
5. Squatting or awkward sitting posture (Utkatasan).
6. Horse riding (may be considered in current scenario with over riding on motor bike or excess car driving).

Established surgical treatment for Horse-shoe Fistula

The most commonly practiced surgical procedures for Horse-shoe fistula are:

1. Radical surgical treatment[3][Figure 2].
2. Wanley’s operation — Posterior midline internal expecting
sphincterectomy combined with laying open the deeper part of the fistula track, with excision of the lateral tracks.[3]

However, a lot of controversies exist regarding the success of these surgeries in terms of prognosis and recurrence of the disease. Hence, there is a definite need to develop newer surgical techniques having non-recurrent prognosis.

Ayurvedic management of Bhagandara

1. Non‑surgical management
   a) Nadivrana Purana, that is, injection of medicated oil through the external opening.
   b) Vrana‑shodhanavarti i.e. packing medicated wicks in the track.

2. Surgical management
   Nadi‑Bhedana Karma i.e fistulotomy in established fistula.

3. Parasurgical procedure
   Ksharasutra ligature technique, i.e. exploration of fistula by ligation of medicated (herbal) seton in the track [Figures 3 and 4].
   Note: If the track is partially fibrosed or track is too long (very high level fistula), then either Guda‑purana (injection of medicated oil through the external opening) with Bhagandara‑nashan oil (e.g., Saindhavadi Taila, Trivritadi Taila, etc.) is done for three to four days or a Vran‑shodhanavarti (medicated thread pack) is kept inside the track to make it open or patent and then the Ksharasutra procedure is performed.

Materials and Methods

Aim and objective of the study
To evaluate the Modified Ksharasutra Chikitsa in ‘Shambukawarta Bhagandara’ (Horse-shoe Fistula in Ano).

Type of study: Single case Study

Place of study: Dr. D.Y. Patil Ayurvedic Hospital, Navi Mumbai

Plan of surgery: ‘Fistulectomy along the arms of Horse-shoe fistula with Ksharasutra,’ ligation in the remaining track connected to the anal canal, and drainage of the postanal space abscess.

Drug Material: Standard Ksharasutra with 21 coatings (11 coatings of Snuhi latex plus seven coatings of Apamargkshar mixed with Snuhi latex plus three coatings of Haridra Powder mixed with Snuhi latex).

Inclusion criteria: Established case of Horse-shoe Fistula in Ano
Plan of modified surgery in Horse-shoe Fistula

Pre operative
The standard pre operative measures included routine blood investigations, radiological investigations including fistulogram, pus culture and sensitivity, colonoscopy, and so on, for confirmation of diagnosis.

Main procedure
- After giving spinal anesthesia, the patient is placed in the lithotomy position.
- Painting of the area is done with betadine and the area is covered with sterilized drape.
- Confirmation of the track is done by pushing betadine mixed with Hydrogen peroxide from the external opening.

For better understanding the innovative (integrated) surgical procedure can be divided into three stages. They are:

Stage 1: Excision of the accessible track along the arms of the horse-shoe fistula by using the coring technique
Stage 2: Ligation of Ksharasutra in the remaining track which is connected with the anal canal
Stage 3: Drainage of the deep postanal abscess with a self-retaining Foley’s Catheter with sac. However, a simple drainage tube can also be fixed instead [Figure 5].

Postoperative management
- Foley’s catheter was removed on the fifth day. (Around 20 to 30 cc of pus was drained on the first two days and it was subsequently reduced)
- Seitz bath with betadine and cleansing of wound was advocated followed by Roller gauze wrung with Betadine packing and daily dressing under aseptic precaution for 10 days.
- To promote healing and reduce pain, oral antibiotics as per pus sensitivity, anti-inflammatory drugs and multivitamins were also prescribed for 10 days.

Results

1. On the basis of the case study it can be conclude that in the surgical management of Shambukawarta Bhagandara, (Horse-shoe fistula), this three-stage innovative (integrated) procedure, that is, Fistulectomy of the tracts along the arms of the Horse-shoe fistula, combined with ligation of Ksharasutra along the accessible tract connected to the anal canal, and drainage of the deep postanal space abscess with a self-retaining Foley’s catheter, gives excellent results, with no recurrence.
2. There is a definite need to do more number of cases using this technique, in order to establish this newer integral line of treatment for this challenging disease.

Case Discussion and Course of Treatment

The Fistula whose anatomical appearance resembles a ‘Horse-shoe or pedal’ is known as Horse-shoe fistula. Looking after the clinical features we can correlate this with the ‘Shambukawarta’ type of Bhagandara.

In spite of the various advancements in the field of surgery, Horse-shoe fistula is still a challenge for both modern and Ayurvedic surgeons, particularly with regard to the longer recovery period and higher recurrence rate.

Following are a few significant points during follow-up treatment, which also needs attention
1. Patient discharged after 10 days, is asked to attend the Surgical Outpatient Department (SOPD) for dressing and follow-up medication.
2. Ksharasutra, which is ligated in the track communicating to the anal canal is changed weekly for six sittings.
3. The communicating tracks that are cut through, simultaneously heal by six weeks.
4. However, it takes approximately three months for complete recovery of the deep wound.

Mode of action of Ksharasutra
The combination helps in:
- Debridement and Lysis of the tissues.
- Antifungal, Anti-inflammatory, and Antimicrobial.
- Another potential action for the chemical component is to destroy the residual glands in the epithelium.
- Simultaneous cutting and healing – The unit cutting time is approximately 0.85 cm.

Simultaneous cutting and healing of the fistula track occurs, which avoids recurrence and sphincteric complications that can otherwise cause incontinence. This mechanism can be explained in a simple way, if we give pressure to wire on an ice
block it passes through it but does not divide the ice.

As per the modern view, this acts as a counter irritant to pain elsewhere and produces a running sore that proves useful for the drainage of harmful materials from the body.

**Other benefits include**
- Early ambulation and minimum hospitalization.
- Low recurrence rate and cost effective.
- Have good cosmetic results.

### References

1. Sushruta Samhita. Prof. K. R. Srikanthamurthy, editor. Varanasi: Chaukhambha Orientalia; Vol.1, Chap.4.2005. p. 490-3, Vol.2, Chap.8.2005. p. 95-100.
2. A concise textbook of Surgery. 4th ed. By Somen Das. Kolkata: S. Das Publication 2006. p.1077.
3. Surgery of the Anus, Rectum and Colon by John Goligher. 5th ed. New Delhi: A.I.T.B.S. Publisher 2004. p. 196-202.
4. Bailey and Love's Short Practice of Surgery. 24th ed. Edited by RC Russell, Williams NS, Christopher JK, editors. London: Hodder Arnold Publication 2004. p. 1265-8.

---

**Announcement**

**iPhone App**

A free application to browse and search the journal’s content is now available for iPhone/iPad. The application provides “Table of Contents” of the latest issues, which are stored on the device for future offline browsing. Internet connection is required to access the back issues and search facility. The application is compatible with iPhone, iPod touch, and iPad and requires iOS 3.1 or later. The application can be downloaded from [http://itunes.apple.com/us/app/medknow-journals/id458064375?ls=1&mt=8](http://itunes.apple.com/us/app/medknow-journals/id458064375?ls=1&mt=8). For suggestions and comments do write back to us.

---

**हिन्दी सारांश**

### शंबुकावर्त भंगदर की संशोधित क्षारसूत्र चिकित्सा

महेशकुमार हारित, अमर पी. द्विवेदी

शंबुकावर्त भंगदर या सात्रातिक भंगदर (Horse-shoe fistula) की चिकित्सा आयुर्वेदिक एवं आयुर्वेद शास्त्रीय चिकित्सकों के लिए आज भी एक कठिन चुनौती है। इस विशिष्ट प्रकार के भंगदर में प्रथमात्मक गुद परिसर भंगदर में विद्रोहित उपचार होते हैं तथा कालांतर में दोनों तरफ के गुद आसपास में भंगदर का निर्माण होता है। इसमें आयुर्वेदिक ‘‘वानलेकृत शर्करहा’’ तथा पारंपरिक क्षारसूत्र चिकित्सा दोनों की ही अपनी महत्वाकांक्षा है। इस तथ्य को देखते हुए हमने शंबुकावर्त भंगदर की चिकित्सा में नई संशोधित क्षारसूत्र चिकित्सा किया है। इसके अंतर्गत हमने आयुर्वेदिक शक्तिचिकित्सा एवं आयुर्वेदिक क्षारसूत्र चिकित्सा का मिश्रित प्रयोग किया है। प्रस्तावित संशोधित क्षारसूत्र चिकित्सा के तीन चरण हैं——

1. प्रथम चरण में उभय गुद परिसरिय प्रांत के बाहरी प्रांत भंगदर शर्करहा के छेदनकर्म किया गया।
2. दूसरे चरण में दोनों ओर के शेष बचे गुद मार्ग संलिप्त भंगदर में शंबुकावर्त बांधा गया।
3. तीसरे व अंतिम चरण में मुख्यलिंका के समानांतर उद्यमिता के निर्देश ‘‘विद्रोहिकार्य’’ (puscavity) तक पूर्ववित्तावर्णाथ मूर्तवित्तावर्ण नाडीयंत्र (Foley’s rubber catheter) को स्थापित किया गया। इन विभिन्न चरणों को चित्र की सहायता से समझाया गया जिससे इस अधयाय का शास्त्रीय चित्र को आसानी से आयोजित किया जा सके। इस संशोधित क्षारसूत्र चिकित्सा के द्वारा शंबुकावर्त भंगदर (horse shoe fistula) के पूरा तरह से सफल इलाज संभव हो सका।