

CASE STUDY

Effective Use of Ksharsutra Ligation for Advanced Internal-External Hemorrhoids: A Case Study

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ABSTRACT

Hemorrhoids, resulting from the downward displacement of the anal cushions due to factors like straining, are categorized into internal (located above the dentate line and covered with mucosa) and external (found below the dentate line and covered with skin). In Ayurveda, this condition is referred to as **Arsha**. Contributing factors include straining during defecation, chronic diarrhea or constipation, hard stools, low-fiber diet, excessive purgation, rectal cancer, pregnancy, and portal hypertension. Common complications include heavy bleeding, thrombosis, strangulation, ulceration, gangrene, anal stenosis, and infections such as perianal or submucosal abscesses. Conventional treatment involves dietary modifications with increased fiber intake, topical applications, sitz baths, laxatives, and pain relievers. Para-surgical techniques like sclerotherapy, rubber band ligation, cryotherapy, infrared coagulation, and laser treatment are used, along with surgical methods such as open or closed hemorrhoidectomy, stapled hemorrhoidopexy, and Lord's anal dilation. In Ayurveda, management includes internal medications (Aushadhi), surgical interventions (Shastra), chemical cauterization (Kshar), and thermal cauterization (Agni). This article presents a case study of a 43-year-old male patient with fourth-degree internal-external hemorrhoids, who experienced a protruding anal mass for eleven months, along with bleeding for eight days, intense pain, and difficulty in sitting. He was treated with Ksharsutra ligation along with supportive Shamana Aushadhi. The treatment was found to be effective, cost-efficient, simple to prepare and apply, and had the added benefit of not significantly disrupting the patient's daily routine.

Keywords- Haemorrhoids, Arsha, Ksharsutra, Apamarga Kshara, Snuhi Ishita, Haridra

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INTRODUCTION

Hemorrhoids are a condition where the anal cushions slide downward, often due to excessive straining or other contributing factors [1]. They are classified into two types: internal hemorrhoids, located above the dentate line and covered by mucous membrane, and external hemorrhoids, situated below the dentate line and covered with skin [2]. In Ayurveda, this condition is known as Arsha, and its causes include straining during defecation, chronic diarrhea or constipation, hard stools, a diet low in fiber, excessive purgation, rectal cancer, pregnancy, and portal hypertension. Complications of hemorrhoids may include heavy bleeding, strangulation, thrombosis, ulceration, gangrene, stenosis, and suppuration, which can lead to perianal or submucosal abscess formation. Modern management includes lifestyle modifications like a fiber-rich diet, use of topical medications, sitz baths, laxatives, and pain relievers. Para-surgical techniques include sclerotherapy, rubber band ligation, cryotherapy, infrared coagulation, and laser treatments. In more severe cases, surgical options such as open or closed hemorrhoidectomy, stapled hemorrhoidopexy, and anal dilation (Lord's procedure) may be considered. Ayurvedic management incorporates medication (Aushadhi), surgical tools (Shastra), caustic alkaline treatment (**Kshar**), and thermal cauterization (Agni) [3-6]. Among these, Ksharsutra therapy is notable for being a minimally invasive technique that can be carried out under local anesthesia. It promotes wound healing and infection control due to its alkaline pH (around 10.3), which has antibacterial properties. The standard Ksharsutra is prepared by applying 11 coatings of Snuhi latex (*Euphorbia nerifolia*), followed by 7 coatings of Snuhi latex mixed with Apamarga Kshara (*Achyranthes aspera*), and finishing with 3 coatings of Snuhi latex mixed with Haridra powder (*Curcuma longa*). The pH of the Apamarga Ksharsutra is

approximately 9.72. This medicated thread aids in cutting, draining, and healing of the affected tissues. Ayurveda has always emphasized both the preventive and curative aspects of diseases, with minimal side effects and complications [7-9]. The ancient surgeon Sushruta, known as the father of surgery, described the use of Kshar and Agnikarma in the treatment of hemorrhoids and fistula-in-ano.

Clinical Presentation

The patient has been experiencing a mass like structure at the anal opening for the past 11 months. Over the last 6 months, there has been a burning sensation and pain during defecation. The patient also reports persistent pain while sitting for the same duration. Complaints of irregular and unsatisfactory bowel movements have been present for 6 months. For the past 1 month, the pain has worsened, making sitting increasingly uncomfortable. In the last 8 days, the patient has noticed intermittent drop-wise bleeding from external hemorrhoids.

Anatomy of Guda

According to Acharya Sushruta, there are 107 Marmas (vital points) in the body, out of which 19 are Sadyapranahara Marmas—meaning injury to these can cause immediate death. Guda Marma is one such vital point. The Guda (anus) is the primary site of Apana Vayu and acts as the exit point for feces (Mala) and flatus (Vata). Its length is approximately 4.5 Angula. Anatomically, the Guda contains three Valis (circular folds):

1. Pravahini (proximal)
2. Visarjini (middle)
3. Samvarani (distal, sphincter)

Each Vali is spaced 1.5 Angula apart and appears in a spiral (Shankhavarta) pattern, resembling the palate of an elephant (Gajatalu) in color.

Ayurvedic Classification of Arsha (Haemorrhoids)

1. Based on Cause (Nidana):

- Sahaja (congenital)
- Uttarakalaja (acquired)

2. Based on Appearance:

- Shushka (dry)
- Ardra (wet)

3. Based on Dosha Involvement:

- Vataja, Pittaja, Kaphaja, Sannipataja, Raktaja, Dvandwaja

4. Based on Site of Origin:

- Bahya Valli (external)
- Madhyama Valli (middle)
- Abhyantara Valli (internal)

5. Based on Prognosis:

- Sadhya (curable), Kashta Sadhya (difficult to cure), Yapya (manageable), Asadhya (incurable)

Modern Classification of Haemorrhoids

Based on Pathological Anatomy:

a) Primary Haemorrhoids:

These are three main haemorrhoids, located at the 3, 7, and 11 o'clock positions.

- The left branch of the rectal artery supplies the 3 o'clock position.
- The right branch divides to supply 7 o'clock (posterior right) and 11 o'clock (anterior right) positions.

b) Secondary Haemorrhoids:

These appear between the primary sites, resulting from further venous congestion.

Based on Degree of Prolapse:

1. First Degree: Swelling remains inside the anal canal.
2. Second Degree: Prolapse occurs during defecation but retracts spontaneously.
3. Third Degree: Prolapse during defecation requires manual repositioning.
4. Fourth Degree: Permanently prolapsed, often with a heavy sensation in the rectum.

Causes of Haemorrhoids

While the exact cause is not fully understood, several contributing factors include:

- Irregular bowel habits (constipation or diarrhea)
- Low-fiber diet
- Sedentary lifestyle
- Straining during defecation
- Increased intra-abdominal pressure (e.g., due to ascites, tumors, or pregnancy)
- Genetic predisposition

- Absence of venous valves
- Aging

During pregnancy, the fetus increases abdominal pressure and hormonal changes weaken venous walls, often causing haemorrhoids. However, symptoms typically resolve after childbirth. Surgery is rarely needed during pregnancy.

Other Risk Factors:

- Obesity
- Chronic coughing
- Prolonged sitting
- Pelvic floor dysfunction

Etiological Classification

1. Idiopathic Causes:

- Hereditary tendency (common in families)
- Anatomical Factors:
 - Lack of valves in superior haemorrhoidal veins
 - Veins pass through rectal muscles, becoming compressed
 - Veins lie in loosely supported tissue, prone to congestion
- Exciting Factors:

- Constipation and straining
- Diarrhea, dysentery, and enteritis
- Physiological Causes:

- Enlargement of the corpus cavernosum rectum due to failure of arteriovenous regulation, leading to venous varicosity

2. Secondary Causes:

- Rectal carcinoma compressing venous drainage
- Pregnancy leading to venous compression and muscular laxity
- Urinary obstruction (e.g., prostate enlargement or urethral stricture) increasing abdominal and venous pressure
- Portal hypertension, as the superior rectal vein drains into the portal system, leading to back pressure

Dietary Factors:

A low-fiber, western-style diet lacking in roughage is often implicated in the formation of haemorrhoids.

AIMS AND OBJECTIVES

The aim of the study was to assess the effectiveness of Ksharsutra in terms of cutting and healing duration in the management of Arsha, as well as to evaluate associated post-operative complications.

MATERIALS AND METHODS

Investigations

Hemoglobin : 14.1 g/dl
 Total RBC Count: 4.84 mill/cmm
 Total WBC Count: 5120/cmm
 Platelet Count: 284000/cmm
 Randum Blood sugar: 102.0 mg/dl
 HBsAg (Hepatitis B surface antigen): Non-Reactive
 Test for HIV - I Antibodies : Non-reactive
 Test for HIV - II Antibodies : Non-reactive

Preoperative Procedure

- Written Consent of patient was taken.
- Cleaning of bowel was done.
- Part preparation of the perianal area was done.
- Xylocaine sensitivity test was done.
- Inj. T.T 0.5 ml was given by I.M. route.

Operative Procedure

The patient was brought to the operation table after confirming stable vital signs (BP: 130/90 mmHg, Pulse: 78/min, SpO₂: 98%). Lithotomy position was given. The operative area was painted and draped under aseptic precautions. Local anesthesia was administered using 2% plain lignocaine combined with bupivacaine hydrochloride injection 0.5%. after anesthesia was achieved, Lord's dilatation was performed. A proctoscope was gently inserted per-anum to visualize the internal hemorrhoids. The external pile mass at the 7 o'clock position was held with a Babcock forceps, and the corresponding

internal pile mass was grasped with a pile-holding forceps. Transfixation and ligation were performed using a Ksharsutra thread, followed by excision of the external pile mass using cautery. The same procedure was repeated for the pile masses at the 11 and 3 o'clock positions. Hemostasis was ensured. Dressing was done using Shatadhauta Ghrita, and anal packing was completed. The patient was then shifted to the post-operative recovery room.

Post operative

The patient was advised to take sitz bath twice a day and was asked to remain mobile as soon as possible. The patient was also advised to take easily digestible diet. Triphala guggulu 2 tabs BD along with dashmoolarishta 15 ml BD and Avipatikara Churna 5gm HS advised. Injection diclofenac sodium IM SOS. After shedding of internal pile mass Jatyadi taila for matrabasti started once in day 30ml.

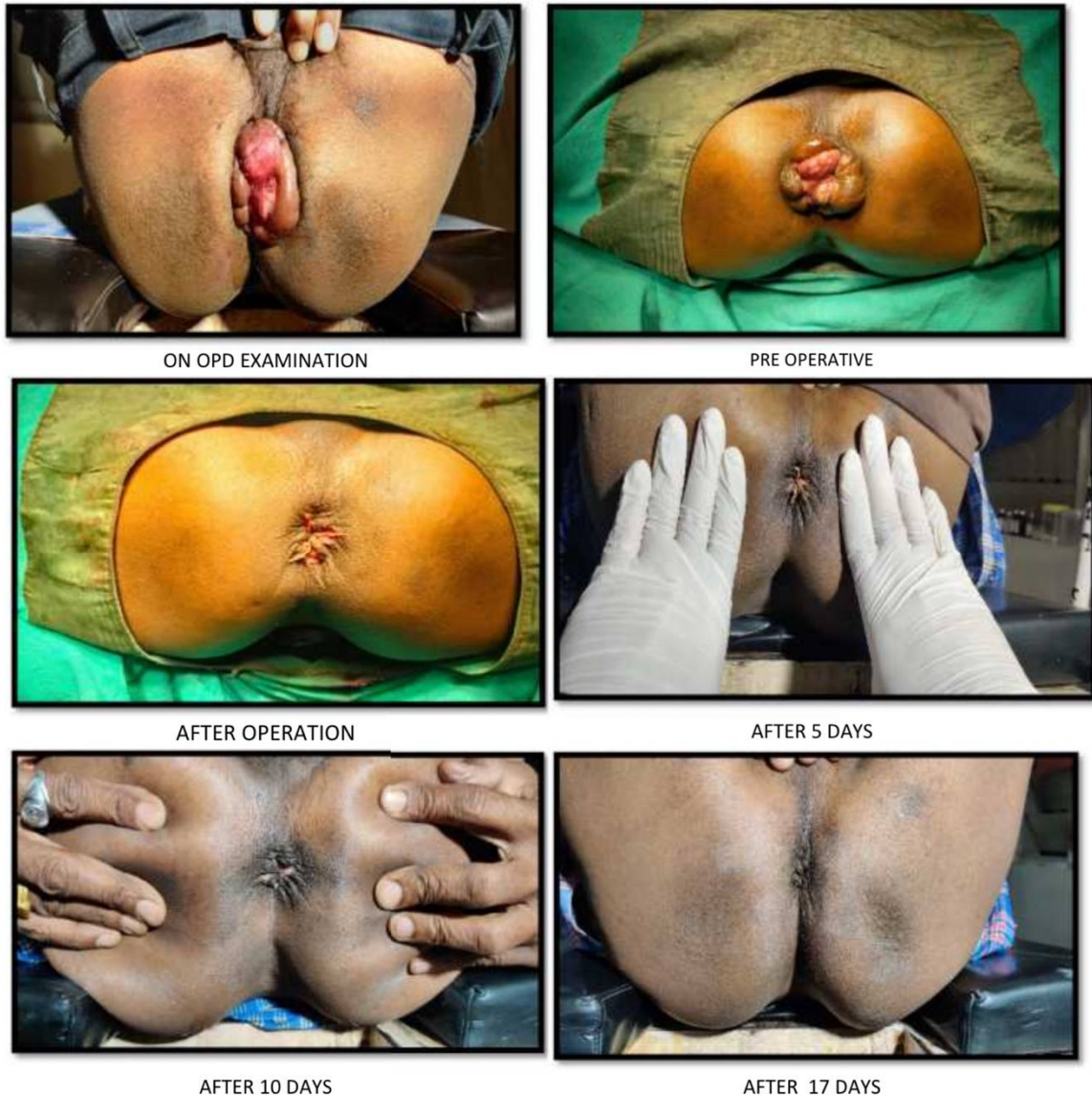


Image 1 – Examination of patient in OPD (3,7,11 o'clock external and internal pile mass and hemorrhoids visible). Pre-operative photo before procedure done. Photo taken after the procedure done (internal haemorrhoids ligated with ksharsutra and external pile mass excised). Follow-up photo taken after 5 days of procedure done (externally wound present which is healing progressively), follow-up photo taken after the 10 days of procedure done (internal hemorrhoids falled, external wound healing looks satisfactory). Follow-up photo taken after 16 days (shows complete wound healing externally).

Follow-up of the Patient

The patient was asked to attend the OPD for week after Ksharasutra ligation for dressing. then every 7 days for 2 months. There was burning type of pain for first three four days which may probably be due to reaction of Ksharsutra with local tissues.

Kshara, Snuhi Ksheer and turmeric said to be unique drug formulation for cutting of arsha pedicle as well as healing of wound. The adjuvant therapy like sitz bath and Matrabasti of Jatyadi taila play important role in local hygiene, Shodhan (cleaning) and Ropan (healing) of the post-operative wound.

Dashmoolarishta worked as Shothahara (anti-inflammatory), Vedanasthapana (analgesic) and Jatyadi taila worked as a Ropaka (healing) which helped in wound healing. To avoid the anal stricture dilatation was advised. Hence along with Khsarasutra ligation in Arsha these adjuvant drugs play role in early healing of the post-operative wound. After 17 days patient was free from all symptoms of Arsha with normal scar of wound without any complications.

DISCUSSION

In modern medicine, various treatment options are available for piles or haemorrhoids, including sclerotherapy, rubber band ligation, cryosurgery, infrared coagulation, and haemorrhoidectomy. However, these methods are often associated with a higher recurrence rate and post-operative complications such as bleeding, pain, delayed wound healing, and anal stricture [9, 10]. In contrast, Ksharasutra ligation therapy is considered more effective due to its minimal complication rate. In this particular case, no post-operative bleeding or other complications were observed following the Ksharasutra procedure. Additionally, long-term issues such as anal stricture and fecal incontinence were not observed.

CONCLUSION

The management of 4th-degree advance hemorrhoids with Ksharsutra ligation, as demonstrated in this case study, highlights the efficacy of integrating Ayurvedic treatment with modern surgical approaches. Ksharsutra, with its unique properties, not only facilitated the gradual necrosis and shedding of hemorrhoidal tissue but also contributed to the overall reduction in inflammation and recurrence rates, providing a cost-effective and less invasive alternative to conventional surgical methods. The patient's complete recovery within 17 days, with no significant postoperative complications, underscores the potential benefits of Ksharsutra in managing advanced hemorrhoids. Additionally, the holistic approach, which combined Ksharsutra with Ayurvedic shaman aushadhi and meticulous postoperative care, played a crucial role in achieving a favorable outcome.

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