

Ayurveda management of Recurrent Ischio-rectal Abscess with Horseshoe connection - A case report

Case Report

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Abstract

Anorectal abscesses are one of the potentially debilitating diseases among them perianal abscess and ischio-rectal abscess are common. Lateral spread of the ischio-rectal abscess through the conjoint tendon leads to a horseshoe abscess. Surgical treatment is incision and drainage. Complications include sepsis, faecal incontinence, and fistula in ano. *Kshara sutra* is proved effective for fistula in ano, which helps in preventing recurrence. Here we report a case of ischio-rectal abscess with horseshoe connection came with swelling and pain over the right perianal region. The condition was diagnosed as *guda vidradi* (perianal abscess) as per Ayurveda classics, and *Bhedana karma* is considered as primary treatment. Considering the recurrence and chronicity, *kshara sutra* ligation was planned after *Bhedana karma*. The case was completely cured with minimal follow-ups. Post-operative wounds healed with minimal scar formation. Adoption of the treatment has given successful results in the management of ischio-rectal abscess with horseshoe connection.

Key Words: Horseshoe abscess, Ischio-rectal abscess, *Guda vidradi*, *Bhedana karma*, *Kshara sutra*.

Introduction

Anorectal abscess is caused by the non-specific obstruction and subsequent infection of glandular crypts of the rectum(1). Depending upon the spread of infection, it is mainly classified into perianal, intersphincteric, supralelevator, and ischio-rectal(2). Among these abscesses, ischio-rectal abscesses are more vulnerable to infection because of reduced vascularisation of fat tissue(3). The incidence of anorectal abscess is 1:10000, approximately 68000 to 96000, with a male prevalence of 3:1(4), and surgically drained abscess incidence is 16 per 100,000 per year(5). Ischio-rectal abscess can spread laterally through the conjoint longitudinal muscle in the anterior or posterior midline direction and will lead to horseshoe abscess(6). Its characteristic U-shape and its ring-like pattern will make it an aggressive perianal disease. Surgical management of an ischio-rectal or horseshoe abscess consists of cruciate incision over the most fluctuating part, along with excision of the skin edges, de-roofing, and abscess(7). A high rate of recurrence has been associated with horseshoe abscesses, ranging between 18% and 50%(8). Poor drainage, failure to break down

loculations, and the absence of multiple fistulous tracts, all increase the risk of recurrence. Complications of horseshoe abscess include sepsis, recurrent abscess, and foetal incontinence(9).

In Ayurveda, ischio-rectal abscess can be correlated with *Gudavidradi* (perianal abscess)(10) and *bhedana karma* (incision) is considered the primary line of management(11). Improper treatment of *guda vidradi* leads to *nadi vrana* (sinus) and in future it may end up in formation of *Bhagandara* (fistula in ano)(12). *Kshara sutra* ligation is considered as the most popular and effective line of management in *bhagandara*(13). Here we report a case of recurrent ischio-rectal abscess with horse shoe connection which was managed effectively with *bhedana karma* followed by *Kshara sutra* ligation.

Patient Information and Clinical Findings

A 56-year-old male driver was not a known case of diabetes or hypertension came with complaints of pain and swelling over the right perianal region for 15 days, which were associated with fever, difficulty in sitting and performing daily routines. The patient was treated at KLE Ayurveda Hospital, Belagavi, Karnataka (MR No. KLE 20013584, OPD 20028023, and IPD 20002911) [Table No.1]. The nature of the pain was progressive and throbbing, and it used to get aggravated by sitting and sleeping in a supine position. Eight years ago, the patient had a surgical history of incision and drainage under spinal anaesthesia for the same complaint. The patient did not have any history of food, drug allergies or addictions.

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A general examination revealed vitals like blood pressure of 120/80 mm Hg, pulse of 96 bpm, respiratory rate of 20 cycles per minute, temperature of 99 F, and no abnormalities were detected on systemic examination. Clinical examination revealed swelling over the right inferior perineal region (7-O clock to 9 O clock position) 4 cm away from the anal verge. A previous surgical scar was noted at the 10 o'clock position over the affected side. Skin over the part was indurated and redness was observed. There was no any discharging sinus. On palpation, swelling was fluctuating in nature with an approximate size of 6-8 cm in diameter associated with a local rise in temperature and tenderness. Haematological Investigations shows Hb % - 12.gm%; WBC – 16,600 cells/cum; RBS – 135mg/dl; Blood Urea– 53 mg/dl; Serum Creatine-1.3mg/dl; Blood group -B+ve; BT – 3.00min; CT-6.30 min. Rise in ESR count (95mm/hr) and C reactive Protein(93mg/dl) suggested infection. Both the urine routine and the ECG were found to be normal.

According to Ayurveda based on the location, sign and symptoms it can be corelated as *Guda vidradi* with *kapha-pitta* predominant.

Therapeutic intervention

The standard treatment principle for abscess is incision and drainage, so it was posted for incision and drainage under spinal anesthesia after proper evaluation of the patient's condition. An incision was made over the most dependent part, i.e., the right inferior perianal region at 7 'o clock. Thick pus was seen through the incision site with a foul smell. A finger was inserted through the opening and all loculi were broken carefully. Further exploration of the cavity revealed that it was extending towards the previous scar mark and also left ischiorectal fossa through the perianal space. A counter incision was made over the previous healed scar and left ischiorectal fossa to aid proper drainage. A probe was inserted from both the incisions (left and right ischiorectal fossa) and a common internal opening was made at the 6 o'clock position below the dentate line, followed by *kshara sutra* ligation on either side. Haemostasis was achieved and cavity packing was done with the *Jatyadi taila*. Approximately 300 mL of pus was collected in the kidney tray, which was measured by the measuring jar. The patient was advised to take oral medicine and take a sitz bath during the post-operative period. The patient was discharged on the 7th day and advised to come for follow-up every 7th day for thread change and wound assessment.

Table: I Showing the disease progression and treatment

| Sl No. | Year | Symptoms | Intervention |
|--------|------|--|---|
| 1 | 2012 | Swelling and pain in right gluteal region | Symptomatic treatment, Analgesics, Rest reduced symptoms |
| 2 | 2012 | Swelling and pain in right gluteal region, Difficulty in walking and sitting | Diagnosed as ischiorectal abscess. Underwent incision and drainage along with antibiotics and analgesics. |
| 3 | 2020 | Swelling and pain in right gluteal region, Difficulty in walking and sitting | Diagnosed as recurrent ischiorectal abscess. <i>Bhedana karma</i> and <i>Ksharasutra ligation Vrana Shodhana</i> (wound clencing) and <i>Ropana</i> (wound healing) Oral Ayurveda Medicines |

Follow up and Outcome

During the follow-up period, the patient was assessed for any changes in the wound and tract assessment. *Every 7th day, the kshara sutra* was changed. A total of four sittings were done on the left side and six sittings on the right side. The patient had mild pain and discharge during the follow-up period and the wound showed signs of healing.

Proper exploration of the abscess cavity helped to identify the horseshoe connection for which application of *kshara sutra* was planned for proper draining and enhancement of the healing process. The wound in the left perianal region healed completely with minimal scar formation on the 30th day and the right perianal region on 45 days. The patient was followed for a period of one year and a reoccurrence was not seen.

Diagnosis

Considering the past history, location, signs and symptoms with all the factors like reddish discoloration of the skin, local rise in temperature, swelling, tenderness and positive fluctuation test our provisional diagnosis was recurrent ischiorectal abscess with horseshoe connection.

Table II: Therapeutic intervention and oral medicines

| Plan of care | Procedure | Duration Days | | | | | | |
|---|-------------------------|---------------|---|----|----|----|----|----|
| | | 1 | 7 | 14 | 21 | 30 | 37 | 45 |
| <i>Bhedana karma</i> (Incision and drainage) | 1 st sitting | ✓ | | | | | | |
| <i>Kshara sutra</i> (Medicated thread) Ligation | 1 sitting | ✓ | | | | | | |
| <i>Kshara sutra</i> (Medicated thread) Change | Right side 6 sitting | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| | Left side 4 sitting | ✓ | ✓ | ✓ | ✓ | | | |

| | | | | | | | | |
|---------------------------------|--|---|---|---|---|---|---|---|
| Vrana shodana (wound cleansing) | Prakshalana with pentabark kashaya (Herbomineral formulation which contains Vata, Udumber, Parish, Plaksha, Ashwath, Tutta, Kasis, and Spatika) (14) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Vrana ropana (wound healing) | Jatyati taila application | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Sitz bath | Pentabark kashaya | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Tab Tripahala guggulu | Two tablets Thrice a day after food | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Tab Nimbadi Guggulu | Two tablets Thrice a day after food | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Sukhsarak choorna | ½ teaspoon at night with warm water | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

Table No. III – Assessment of Wound healing

| Wound Parameter | | Assessment Duration Days | | | | | | |
|------------------|-------|--------------------------|----------------|----------------|----------|------------|--------|----------|
| | | 1 | 7 | 14 | 21 | 30 | 37 | 45 |
| Pain (VAS) | | 8 | 5 | 4 | 3 | 3 | 1 | |
| Size | Right | 6.5x5.5cm | 5x4cm | 4.5x3cm | 3.6x2cm | 2.6x 1.5cm | 1x1c m | 1x0.5c m |
| | Left | 5x3.5cm | 3.8x2cm | 2.2x1.2cm | 1x0.5cm | | | |
| Depth | Right | 12mm | 10mm | 8mm | 5mm | 4mm | 2mm | |
| | Left | 10mm | 7mm | 5mm | 2mm | | | |
| Discharge | Right | Purulent | Serosanguinous | Serosanguinous | Serous | Serous | | |
| | Left | Purulent | Serosanguinous | Serous | Serous | | | |
| Edge | Right | Well Defined | Well Defined | Distinct | Slopping | | | |
| | Left | Well Defined | Distinct | Slopping | Slopping | | | |
| Floor | Right | Slough | Slough | #RGT | #RGT | *ES | *ES | |
| | Left | Slough | #RGT | #RGT | *ES | | | |
| Surrounding skin | Right | Normal for ethnic group | | | | | | |
| | Left | | | | | | | |

VAS - Visual Analogue Scale #RGT – Red Granulation tissue *ES -Epithelialisation

Discussion

The present case was diagnosed as a horseshoe abscess secondary to an ischioanal abscess. In horseshoe abscess, the treatment becomes difficult due to the specific pattern of spread, reoccurrence, and formation of horseshoe fistulas. The goal of our treatment was to treat and prevent these complications as effectively as possible. *Vidradi* is divided into two varieties, i.e., *bahya* (external part of body) and *antar vidradi* (internal part of body). *Guda vidradi* falls under *antar vidradi* and the treatment principle explained is *bhedana* and *visravana* (drainage) *karma*(15,16). This procedure helps to drain pus properly, thereby reducing the pain and speeding up the healing process. *Kshara sutra* is widely accepted as an effective treatment modality for complex fistulas like multiple openings and horseshoe fistulas. In the present case, the presentation was a horseshoe connection, so *Bhedana* followed by *kshara sutra* application was planned in this case. This has showed significant result in the wound healing. *Bhedana karma* over the most dependent part (right perianal region) with counter incisions on the previous scar mark and the left perianal region promoted proper pus drainage and exploration of the cavity and tract. *Kshara sutra* possesses properties

like antibacterial, anti-inflammatory, antifungal, and chemical cauterization. As *kshara sutra* is made by smearing *haridra* (*curcuma longa* Linn), *apmarga kshara* (alkali derived from *Achyranthus aspera* Linn), and *snuhi ksheera* (latex derived from *Euphorbia neriifolia* Linn). *Haridra* has anti-bacterial, antifungal, and anti-inflammatory properties(17). Hence, it helps in the proper healing of the fistulous tract as well as controlling the infection. *Snuhi* (*Euphorbia neriifolia*) has *tikshna* (sharpness), *snighda* (unctuousness), *laghu* (lightness), *guna* (quality) along with its *ushna* (hot) *virya* (potency). This will also help in chemical cauterization of the unhealthy granulation tissue at the same time. Recent research highlights that *Kshara sutra* tied at appropriate pressure helps in cutting the fibrous tract, ensuring proper drainage and healing of the tract.

There is a reduction in the wound size, depth, discharge was seen. This was because *prakshalana* (pouring) of the wound was done with *pentabark kashaya*. The components of *pentabark kashaya* are *Vata* (*Ficus bengalensis* Linn), *Udumbara* (*Ficus racemosa* Linn), *Ashwatha* (*Ficus religiosa* Linn), *Parish* (*Thesposia populnea* Soland.), *Plaksha* (*Ficus infectoria* Roxb), *Kasisa* (Ferrous Sulphate (FeSO₄·7H₂O)), *Tuttha* (Copper Sulphate

(CuSO₄7H₂O)), and *Spatika* (Potash Alum (K₂SO₄Al₂SO₄)₃24H₂O)). The active phytochemicals of this formulation are tannins, alkaloids and saponins which acts as anti-inflammatory and antimicrobial activity(18). *Jatyadi taila* possess *Kashaya* (Astringent) *tikta* (Bitter) *rasa*(Taste), *laghu* (lightness), *ruksha gunas* (non-unctuousness) along with its active phytochemicals like flavonoids, essential oils (terpenoids), tannins (phenolics), glycosides, steroids and alkaloids which helps in wound healing (*ropana*) (19).

Triphala guggulu is mainly indicated in *Bhagandara*, *Arsha* (haemorrhoid), and *Sotha* (inflammation)(20). *Triphala*, which helps in relieving constipation and healing wounds, also soothes the inflamed mucous layer(21). *Guggulu* (*Commiphora mukulu* Engl Pennel) is best-known for its anti-inflammatory herbs of *Ayurveda*. *Pippali* (*Piper longum* Linn) promotes digestion and has *Vata Shamaka* (Pacifyingvata), *Shothahara* (Anti-inflammatory), and *vana ropana* properties(22).

Nimbadi Guggulu is another *guggulu* combination that acts as an analgesic, antimicrobial, and anti-inflammatory agent. Drugs of this formulation contain *tikta* (bitter) and *kashaya* (astringent) *rasa*, which pacifies *kapha* and *vata*(23). *Nimba* is well known for its antibacterial, anti-inflammatory, and antifungal activity, and *guggulu* is well known for its anti-inflammatory action. *Sukhsarak choorna* contains *swarnamukhi* (*Cassia angustifolia* Vahl Pennel), *sunti* (*Zingiber officinale*), *Haritaki* (*Terminalia chebula* Retz), *Vidanga* (*Emblia ribes*), *Amalaki* (*Phyllanthus emblica*), *Yavani* (*Trachyspermum ammi* Linn.) and *Yastimadhu* (*Glycyrrhiza glabra* Linn.) and has its own traditional properties like laxative, digestive, blood purifier and liver disorder. *Sukhsarak churna* also has antioxidant properties and inhibits -Amylase activity(24) of giving *sukhsarak choorna* was to prevent constipation and excessive straining during defecation.

Conclusion

Ischiorectal abscess with horseshoe connection is difficult for the management due to complications like horseshoe fistula and reoccurrence. The present case was managed successfully with *bhedana* and *visravana karma* followed by *kshara sutra* application. Exploration of abscess and identifying the horseshoe connection play an important role in effective management. Proper drainage of pus and dressing with *jatyadi taila* followed by *ksharasutra* application has given promising results in managing complex fistulas.

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Figure 1 – Abscess drainage



Figure 2 – Breaking Pus locules



Figure 3 – Horseshoe connection



Figure 4 – Ksharasutra Ligation



Figure 5 – On 30th day



Figure 6 – On 45th day


