Integrative approach in the management of anterior anal fistula with scrotal extension – A single case report

Dr. Riddhi Ganatra[1*], Dr. T S Dudhamal[2]

[1]PhD Scholar, Department of Shalya Tantra, Institute of Teaching and Research in Ayurveda (INI), Ministry of AYUSH, Jamnagar-361008, Gujarat, India.

[1]Professor and HOD, Department of Shalya Tantra, Institute of Teaching and Research in Ayurveda (INI), Ministry of AYUSH, Jamnagar-361008, Gujarat, India.

Corresponding Author:

***Dr Riddhi Ganatra**

MS(Ayu), PhD Scholar

Department of Shalya Tantra,

Institute of Teaching and Research in Ayurveda (INI), Ministry of AYUSH, Jamnagar-361008, Gujarat, India.

Mail ID: **ridsganatra21@gmail.com**

Abstract Fistula in ano has always been a surgical challenge for the surgeon due to the high recurrence rate. This case report depicts the successful management of anterior scrotal-based fistula through an integrative approach. A forty-four-year-old male patient presented with perianal swelling and intermittent discharge from ano for 3 years. The patient had a history of failed surgical procedures to cure his fistula in ano. Based on clinical as well as transrectal ultrasonography he was diagnosed with a low type of inter-sphincteric long anterior scrotal-based fistula. The patient was operated on with partial fistulectomy along with *Apamarg Ksharsutra* ligation. The post-operative wound was managed with an integrative approach. After eight weeks of a holistic approach, the post-operative fistulous wound completely healed with no recurrence noted within 1.5 years. Integrative management gives a promising outcome in a scrotal-based anterior anal fistula.

Keywords *Fistula-in-ano, Ksharasutra, Post operative wound.*

Introduction

Scrotal extension of anal fistula is defined as the presence of an external opening on the scrotal skin surface or borderline area between the scrotum and perineal skin. Goodsall's rule describes primarily the course of a fistulous tract by its external opening but there are some exceptions such as fistula in ano with scrotal extension. The study reported that 90% of anterior scrotal-based fistula in ano had an anterior anal opening.[1]The prevalence of fistula in ano predominantly seen in males ranges from 5 -12 per 1,000,00 population.[2]Anterior anal fistula with scrotal extensions is a challenging condition that

needs extra attention. The surgical management of fistula-in-ano is consistently complicated by a high recurrence rate, which can fluctuate between 7% and 50% based on the specific surgical technique employed.[3]This finding aligns with the ancient Ayurvedic text, Sushruta Samhita, which classifies *Bhagandar* (fistula-in-ano) as a *Krichha Sadhya Vyadhi* (~Difficult to cure).[4] This case report showcases the success of a combined treatment approach for anterior anal fistula with scrotal extension.

Patient information

A 42-year-old man labour presented with a 3-year history of perianal swelling, on and off pain in ano, and intermittent anal discharge. The patient had a history of undergoing incision and drainage for a perianal abscess three years prior. He was taking unscheduled antibiotics and analgesics from a general practitioner. He has a negative history of diabetes, hypertension, and other systemic comorbidities. His overall condition was fair.

Clinical findings

On clinical examination with the patient in the lithotomy position, four external fistulous openings were identified in the perineum and base of the scrotum, approximately 10 cm from the anterior anal verge in the 12-1 o'clock region. Palpation revealed a thick fibrotic tract at the external fistula opening, and a digital rectal examination identified the possible internal opening at the 12 o'clock position. Tenderness was present at or surrounding the external fistulous opening. (Figure 1) By physical examination, the patient was provisionally diagnosed as a case of anterior anal fistula with scrotal extension.

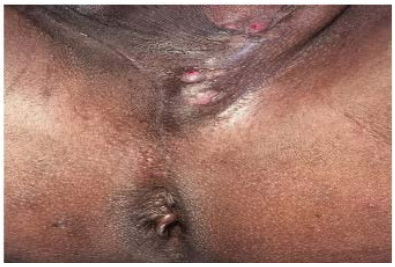

Figure 1 Pre-operative on first day of consultation

Timeline

Table 1 Timeline of patient events and his surgical and conservative measures.

Sr.no.	Year	Clinical scenario and therapeutic measures
1.	2019	The patient experienced pain and swelling in ano. He visited a nearby surgeon and underwent Incision and Drainage for a perianal abscess
2.	2019-2022	The patient had on-and-off perianal swelling, pain, and discharge. He reported self-medicating with antibiotics and analgesics prescribed by various healthcare providers.
3.	Jan 2022	A patient visited our OPD for the same complaints and after clinical examination, he was advised for Transrectal Ultrasonography
4.	Feb 2022	After confirming the diagnosis as an Anterior low type of inter-sphincteric fistula in ano he advised surgical management and admitted to IPD.
5.	18 Feb 2022	Under spinal anesthesia, partial fistulectomy with seton placement. *Apamarg Ksharasutra* changed from seton on

		day 3rd was done to manage the anterior fistula in ano.
6.	20 Feb 2022	The patient was discharged from the hospital and scheduled for regular follow-up visits to ensure proper wound status and timely replacement of the *Ksharsutra*.
7.	25 March 2022	*Ksharsutra* cut-through was done.
8.	8 April 2022	Post-operative fistulous wound completely healed.
9.	Oct 2023	The patient reported no recurrence of fistula symptoms in successive 1.5 years.

Diagnostic assessment

To confirm the diagnosis fistula in ano, Transrectal Ultrasonography (TRUS) was done to identify the course and level of scrotal extension of a fistulous tract in a patient. Transrectal Ultrasonography shows the 10-11 cm long curvilinear branching fistula seen in perianal region with multiple external openings in the perineum and root of scrotum between 12 to 1 o'clock position and one internal opening at 12 o'clock position, which is 5 mm proximal to the anal verge. TRUS confirms the diagnosis as a low inter-sphincteric long anterior scrotal-based fistula (Figure 2).

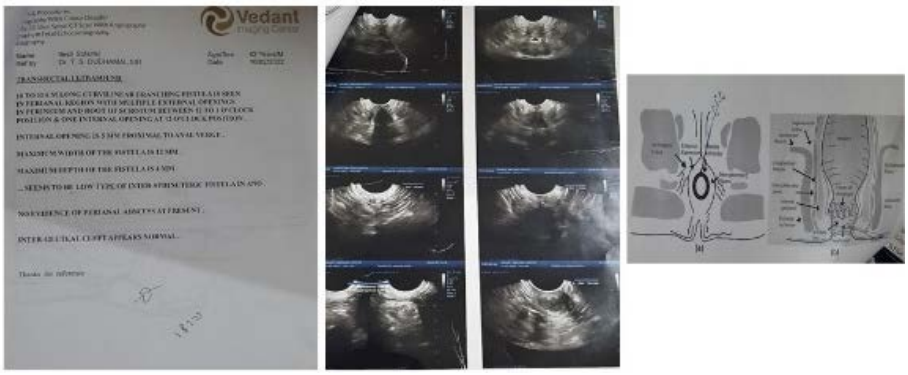

Figure 2 Transrectal ultrasonographic image

All the laboratory findings such as CBC, Biochemistry, and Serology, were within normal range. After thoroughly examining and confirming the diagnosis, the patient decided to go for a surgical intervention which was partial fistulectomy along with *Apamarg Ksharasutra* ligation.

Therapeutic intervention

Written informed consent was obtained from the patient, and the standard pre-anesthesia and preoperative protocols were followed before surgery. After giving spinal anesthesia, a lithotomy position was given to the patient. To confirm the trajectories between multiple external fistulous opening and internal opening the betadine solution along with hydrogen peroxide test was done. The solution injected from scrotal based highest external fistulous opening which came out from other two external opening in perineum and internal at 12 o'clock opening from anal canal. In same direction probing was done from external opening towards internal opening. The coring out of all fistulous tract along with main fistulous tract up to the outer margin of external sphincter anteriorly. In remaining fistulous tract seton i.e., barbour thread no. 20 was placed (Figure 3). The cored fistulous tract was sent for histopathological investigation and result suggested chronic no-specific inflammation, no any sign of granuloma or malignancy.

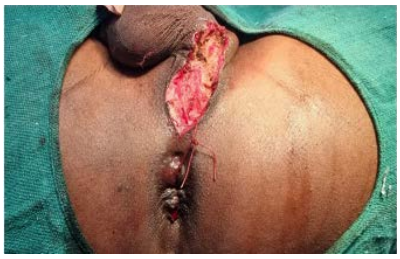

Figure 3 Post operative

On the next day oral antibiotic with antacid (Tab Mahacef 200mg, Tab Rabikind DSR 25mg) and Analgesic (tab zerodol sp) form pain management course was given for 5 days on prophylactic basis. Patient advised to take lukewarm sitz bath with *Panchvalkal Kwatha* and aseptic dressing with same. Oral polyherbal medicines such as *Kanchnar Guggulu* Tab 2 tablet (500 mg) thrice a day after food and *Varunshigru Kwatha* 20ml twice a day empty stomach was prescribed to the patient till complete healing of wound.

Follow-up and Outcome

The Barbour thread was replaced with *Apamarg Ksharasutra* on 3rd post operative day and *Ksharsutra* was changed at interval of every 7 days for 4 weeks. The pain at post operative wound site was gradually diminished at the end of 1st week. Pus discharge from post operative wound was gradually decreased and completely diminished on 3rd week. On 5th week *Ksharasutra* cut through the fistulous tract completely leaving the perianal wound anteriorly. Onwards 5th week patient complaints about occasionally mild itching at post operative wound area which shows the sings of epithelialization. The wound healed completely after 8 weeks of treatment. After complete wound healing digital rectal examination was done to rule out sphincter tone and it was revealed adequate sphincter tone. The follow up of patient taken for next one and half years but no any recurrence of complaints was noted. (Figure 4-9)

Figure 4 Post operative after 1st week

Figure 5 Post operative after 3rd week

Figure 6 Post operative after 4th week

Figure 7 Post operative after 5th week

Figure 8 Post operative after 6th week

Figure 9 Post operative after 8th week – complete healing

Discussion

Fistula-in-ano presents a significant clinical challenge to surgeon due to a paucity of ideal treatment modalities and a high recurrence rate. This is case report of anterior fistula in ano with multiple scrotal based fistulous opening adding to exception of Godsall's rule which necessitates carful consideration of sphincter preservation surgery. There is multiple available surgical option for this but the partial fistulectomy with *Ksharsutra* ligation was choice of treatment in this case to preserve sphincter integrity and prevent recurrence of fistula. As *Ksharasutra* therapy is considered the safest and more reliable modality now a days in Ayurveda with high success rate and low recurrence than conventional surgeries.[5] In this case seton was placed initial during operative for draining purposes to avoid collection of pus in inter sphincteric space and to avoid the chemical reaction by *Ksharasutra* in post operative raw wound.

Apamarg Ksharasutra (~chemical seton) has an alkaline property that acts as antimicrobial as well as simultaneously drained the pus and heals the fistulous tract which ultimately prevents the recurrence.[6] *Ksharsutra* therapy also prevent the scar or sphincter deformity which is common complication of fistulectomy or fistulotomy. Research based studies suggested that *Panchvalkal Kwatha* has proven antimicrobial, anti-inflammatory, analgesics and wound healing property.[7] In this case oral administration of *Kanchnar Guggulu* and *Varunshigru Kwatha* work on normalizing the vitiated *Rasa* and *Meda Dhatu* which helps in faster healing by reducing *Srava* (Discharge).[8] This supportive medication also proven anti-inflammatory and anti-microbial properties which ultimately affects the wound healing.

Conclusion

Anterior low type of inter sphincteric fistula in ano extended to the scrotal base with multiple fistulous opening successfully cured with the integrative approach without any recurrence. The integrative approach in the management of fistula in ano reduces the suffering of the patient, is cost-effective, low complication, and time trusted since ancient times.

Acknowledgement

I express my sincere gratitude to respected Director ITRA ,Jamnagar to give permission to conduct research and providing all facilities in department of Shalya Tantra.

Conflict of interest

Nil.

References

1. Araki Y, Kagawa R, Yasui H, Tomoi M. Rules for anal fistulas with scrotal extension. J Anus Rectum Colon. 2018 May 25;1(1):22-28.
2. Carr S, Velasco AL. Fistula-in-Ano. [Updated 2023 Jul 31]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK557517/
3. Bakhtawar N, Usman M. Factors Increasing the Risk of Recurrence in Fistula-in-ano. Cureus. 2019 Mar 7;11(3): e 4200.
4. Shastri Ambikadatta, editor. Susuruta Samhita of Sushruta, Nidana Sthana. Ch. 5, Ver. 14. Edition 1 Varanasi: Chaukhamba Sanskrit Sansthan; 2014. p. 319.
5. Faridi, Khusboo; Sreenadh, P.; Mahanta, Vyasadeva; Sherkhane, Rahul1. Management of transsphincteric fistula-in-ano by modified conventional Ksharasutra therapy: A case report. Journal of Ayurveda Case Reports. 2021July-sept; 4(3):95-99.
6. Barbhuiya, Nasreen Hanifa; Aishwarya, K.; Sherkhane, Rahul; Mahanta, Vyasadeva; Gupta, Sanjay Kumar. A Case Report on the Management of Fistula-in-Ano by Modified Conventional Ksharasutra Therapy: A Sphincter-Saving Technique. Journal of Ayurveda. 2021Apr–Jun; 15(2):104-108.
7. Meena RK, Dudhamal T, Gupta SK, Mahanta V. Wound healing potential of Pañcavalkala formulations in a postfistulectomy wound. Anc Sci Life. 2015 Oct-Dec;35(2):118-21.
8. Kaur Jagmeet, Chauhan Milan. Kanchnar Guggulu and Varunadi Kashaya in Hypothyroidism -A Case Study. Int. J. Ayur. Pharma Research.2014;2(2):58-60