

Case Report

Successful treatment of recurrent anal fistula in a patient with hepatitis B using Kshar Sutra: a case report

Prasad Bapat¹, Vaidehi Bapat², Deepak Phalgune^{3*}

¹Department of Shalya Chikitsa and Kshar Sutra, Om Ayurvedic Clinic, Pune, Maharashtra, India

²Department of Ayurveda, Om Ayurvedic Clinic, Pune, Maharashtra, India

³Department of Research, Poona Hospital and Research Centre, Pune, Maharashtra, India

Revised: 27 August 2026

Accepted: 06 October 2026

*Correspondence:

Dr. Deepak Phalgune

E-mail: dphalgune@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

The ideal treatment for fistula-in-ano remains elusive, despite several treatments being described. The treatment of fistula-in-ano is a tightrope walk between preserving continence and preventing recurrence. A 49-year-old male patient was suffering from fistula-in-ano for 9 years. The patient was positive for HBsAg (Australia antigen). Kshara Sutra thread was used for the treatment. No internal medication was given for wound healing or infection control. There were no complications such as infection, severe pain, severe bleeding, and incontinence after the procedure. The patient was completely cured and is disease-free for 33 months. Kshara Sutra is an effective treatment with no complications and complete healing.

Keywords: Fistula-in-ano, Hepatitis B, Kshar Sutra, Local infiltrative anaesthesia, Ayurvedic treatment

INTRODUCTION

Although fistula-in-ano (FIA) is a common condition, it significantly impairs quality of life. The infection in the anal gland forms an abscess, most commonly in the 3 o'clock and 9 o'clock positions, and 20-85% of perianal abscesses are reported to progress to FIA. As such, anal fistula should be considered a continuing disease of perianal abscess.¹ Treatments such as fistula-tract laser closure (FiLaC), ligation of inter-sphincteric fistula tract (LIFT), fistulotomy, cutting seton, seton stitch, fistulectomy, fibrin glue injection, fistula plug, endorectal advancement flap, video-assisted anal fistula treatment, and stem cell therapy are practised throughout the world. The therapeutic efficacy of Kshar Sutra has been well established in the existing literature.² The goal of all treatment strategies is either to eliminate infected tissue or address the sequelae of previous interventions. We present a rare case of a patient who was HBsAg (Australia antigen) positive and had a recurrent

trans-sphincteric fistula successfully treated with Kshar Sutra, a medicated seton.

CASE REPORT

A 49-year-old male had been suffering from FIA for six years. Fistulectomy had been performed five, four, three, and two years before Kshar Sutra treatment. But there was no relief for the patient. The patient was positive for HBsAg. The patient's liver function tests were within normal limits. A physical examination was conducted at baseline at Om Ayurvedic Clinic, Pune, India. On examination in the lithotomy position, the internal opening was at the 6 O'clock position, 2.5 cm from the anal verge. There were two external openings attached to the main fistula track. One was at the end, and the other was 2.5 cm from the anal opening. There was a previously placed rubber seton in the smaller fistula track (Figure 1). There was no anal sphincter spasm.



Figure 1: Previously placed rubber seton in the smaller fistula track

The magnetic resonance imaging (MRI) fistulogram performed on third month (Figure 2) showed a nearly straight T2-weighted imaging (T2W)/Short Tau Inversion Recovery (STIR) hypertense trans sphincteric fistulous track ascending through gluteal fat along the medial side of the right buttock from the external opening at the 7 O'clock position and internal opening at the 6 O'clock position approximately 2.5 cm from the anal verge. There was a short further extension anterosuperior in the right ischiorectal fat. The approximate length of the fistulous track was 8 cms.

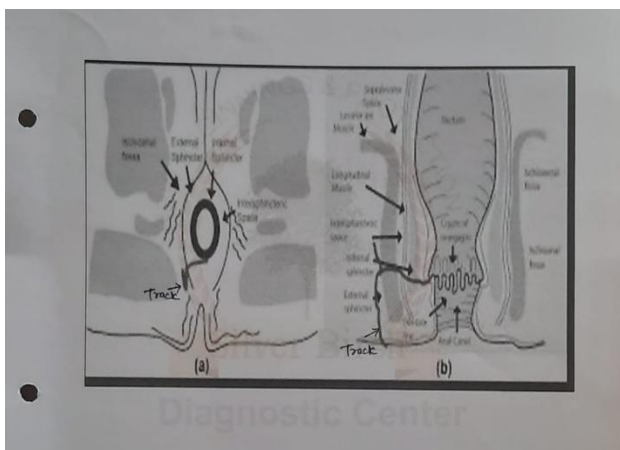


Figure 2: Magnetic resonance imaging fistulogram plain

The patient was healthy, and there was no history of Crohn's or any other disease. The Kshar Sutra thread was used to treat the patient's fistula. Informed consent was obtained. Kshar Sutra treatment started in October 2023. Under local anaesthesia, the fistula was traced with a probe. The Kshar Sutra seton was then inserted through the external opening of the fistula and taken out through the anus. Both ends of the thread were tied to fix its position (Figure. 3). As both external openings were on

the same line of the fistula tube, only one medicated thread was inserted.



Figure 3: Both ends of each thread were tied to fix their positions

The procedure took 30 minutes. Weekly follow-ups were on an outpatient basis. Local anaesthesia was used in and around the fistula each time. The thread was replaced weekly with a new one. The patient had follow-ups for 6 weeks, and a new Kshar Sutra was inserted each week using the same procedure. There was an open, clean wound after 6 weeks of treatment. No supplementary medicines were prescribed for wound healing or infection control. A non-steroidal anti-inflammatory drug was recommended as a painkiller whenever necessary. There were no complications such as infection, severe pain, severe bleeding, and incontinence following the procedure. Daily dressing with povidone-iodine® 10% liquid was advised. The wound was completely healed in 7 weeks. The patient was placed under observation for 8 weeks. He has been fistula-free for the last 33 months (Figure. 4).



Figure 4: Follow-up picture taken 33 weeks (March 2026) after the Kshar Sutra procedure

DISCUSSION

The management of fistulas is inherently challenging and requires a comprehensive approach, with the primary goal being complete healing of the tract while preserving anal continence.³ The surgical management of complex fistulas should be minimally invasive, safeguard sphincter function, and ensure complete eradication of septic foci within the tract to promote effective healing.⁴ The success of anal fistula treatment depends on multiple factors, including preoperative assessment, the surgeon's skill and experience, selection of an appropriate surgical technique, and postoperative wound management.⁵ As the structure, length, and trajectory of an anal fistula are highly variable, there is ongoing controversy among surgeons regarding the optimal treatment approach. Numerous surgical techniques are practiced globally. These treatments can be broadly classified into two categories: aggressive approaches, such as fistulotomy, LIFT, and flap procedures; and conservative approaches, including setons, fibrin glue, fistula plugs, biological mesh, and FiLaC. The reported healing rates are 75.0% for fistulotomy, 64.0% for cutting seton, 55.0% for fistula plug, 53.0% for advancement flap, and 42.0% for LIFT.⁶ Rojanasakul et al and Vander Mijnsbrugge et al reported a success rate of LIFT for FIA treatment of 94.4% and 40.0%, respectively.^{7,8} van der Hagen et al observed that after 12, 48, and 72 months, the FIA had recurred in 9 (22%), 26 (63%), and 26 (63%) patients of their mucosal advancement flap group.⁹ Frountzas et al conducted a systematic review and meta-analysis of eight studies, which included 476 patients. The study reported that the pooled success rate of the FiLaC technique was 63%, and that the complication rate was 8.0%.¹⁰

Negative pressure dressings in combination with fistula closure techniques may also provide satisfactory outcomes.³ Hippocrates mentioned the use of horsehair setons.¹¹ A medicinal herbal thread named "Kshar Sutra" was described for FIA by Sushruta, an ancient Indian surgeon, in 500 BC.¹² The preparation of Kshara Sutra is a lengthy and intricate process. The standard traditional Ayurvedic method was employed to prepare the Kshara Sutra thread. Barbour's Cotton Thread No. 20 was coated with the latex of the Snuhi plant (*Euphorbia neriifolia* Linn), a water-soluble extract of Apamarga (*Achyranthes aspera* Linn), and turmeric powder. A total of 21 layers of this herbal combination were applied in a sterile environment. Once the coatings dried, the threads were cut into the required lengths. Because the medicinal coating reacts with the infected tissue and dissolves within 7 days, the thread must be replaced with a new one. The Kshar Sutra functions as both a herbal medication and a cutting seton. The Kshar Sutra releases the drug slowly and exhibits both cutting and healing actions. The incontinence and other adverse effects minimized due to its gradual cutting and healing mechanism.¹³ The Kshar Sutra technique is an ancient Indian para-surgical treatment that serves as a middle ground between aggressive and conservative approaches.

Additionally, there is no need for any postoperative medication to promote healing; maintaining wound cleanliness is generally sufficient. Since Kshar Sutra essentially functions as a cutting seton, it may impact gas or faecal continence. Although this has not been evaluated in a well-designed cohort using standardized tools such as the Cleveland or Warner incontinence scales, it is reasonable to assume that the incontinence rates observed with cutting setons may also apply, to some extent, to Kshar Sutra treatment.

CONCLUSION

The presence of hepatitis B infection necessitated careful preoperative assessment of liver function and coagulation status. However, the patient had no evidence of significant hepatic dysfunction or coagulopathy, allowing successful management of the recurrent anal fistula with Kshara Sutra. Kshara Sutra is an effective treatment for fistula-in-ano without any complications, with complete healing. This treatment ensures the destruction of fistula structures, removal of infection and helps the body to create healthy tissue without any further complications.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Afşarlar CE, Karaman A, Tanır G, Karaman I, Yılmaz E, Erdoğan D, et al. Perianal abscess and fistula-in-ano in children: clinical characteristic, management and outcome. *Pediatr Surg Int*. 2011;27:1063-8.
2. Bapat P, Bapat V, Phalgune D. Pilonidal sinus extended to create transphincteric anal fistula treated by Kshara Sutra (a medicated herbal seton) without antibiotics: a rare case report. *Indian J Colorectal Surg*. 2022;4:73-5.
3. Patel A, Gillespie C, Kiosoglous AJ. Unexpected complication after radical (inguinal) orchidectomy: trans-sphincteric anoscrotal fistula. *BMJ Case Rep*. 2017;2017.
4. Kumar TS, Naresh G, Akther MJ. LIFT procedure for long complex ano-scrotal fistula and review of literature. *Int Surg J*. 2017;4:423-6.
5. Bakhtawar N, Usman M. Factors increasing the risk of recurrence in fistula-in-ano. *Cureus*. 2019;11.
6. Jayne DG, Scholefield J, Tolan D, Gray R, Edlin R, Hulme CT, et al. Anal fistula plug versus surgeon's preference for surgery for trans-sphincteric anal fistula: the FIAT RCT. *Health Technol Assess*. 2019;23(21):1-76.
7. Rojanasakul A, Pattanaarun J, Sahakitrungruang C, Tantiphlachiva K. Total anal sphincter saving technique for fistula-in-ano: the ligation of intersphincteric fistula tract. *J Med Assoc Thai*. 2007;90:581-6.

8. Vander Mijnsbrugge GJH, Felt-Bersma RJF, Ho DKF, Molenaar CBH. Perianal fistulas and the LIFT procedure: results, predictive factors for success, and long-term results with subsequent treatment. *Tech Coloproctol.* 2019;23:639-44.
9. van der Hagen SJ, Baeten CG, Soeters PB, van Gemert WG. Long-term outcome following mucosal advancement flap for high perianal fistulas and fistulotomy for low perianal fistulas: recurrent perianal fistulas: failure of treatment or recurrent patient disease? *Int J Colorectal Dis.* 2006;21:784-90.
10. Frountzas M, Stergios K, Nikolaou C, Bellos I, Schizas D, Linardoutsos D, et al. Could FiLaC™ be effective in the treatment of anal fistulas? A systematic review of observational studies and proportional meta-analysis. *Colorectal Dis.* 2020;22(12):1874-84.
11. Malik AI, Nelson RL. Surgical management of anal fistulae: a systematic review. *Colorectal Dis.* 2008;10:420-30.
12. Singhal GD, Sharma KR. Bhagandara chikitsa adhyaya. In: *Sushruta Samhitha: Ancient Indian Surgery. Part II.* Delhi: Chaukambha Sanskrit Samsthana; 1972. p. 319-20.
13. Bapat P, Bapat V, Phalgune D. Recurrent trans-sphincteric ano-scrotal fistula cured by Kshar Sutra treatment. *World J Colorectal Surg.* 2025;14:136-9.

Cite this article as: Bapat P, Bapat V, Phalgune D. Successful treatment of recurrent anal fistula in a patient with hepatitis B using Kshar Sutra: a case report. *Int Surg J* 2026;13:2301-4.