



## Original Article

# Kharsutra Ligation with Partial Fistulectomy-As a Treatment for Anterior Trans-Sphincteric Fistula in Ano- A Case Study

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Perianal fistulas are prevalent in 0.01- 0.05% of the population and are commonly associated with discomfort and morbidity to the patient. Surgical treatment is the only modality of management of fistulas with the pitfall of high rate of recurrence. In Transsphincteric fistulas, the track passes from the inter sphincteric space through the external sphincter into the Perianal region. Surgical treatment of perianal fistulas frequently affects fecal continence. Sphincter saving techniques like Ksharsutra (cutting seton) and fistulectomy has been advocated to minimize the risk of sphincter injury,

**Keywords:** *Fistula in ano, Anterior trans sphincteric Fistula in ano, kshar sutra ligation with partial fistulectomy*

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**INTRODUCTION**

Hippocrates, in about 430 BCE, made reference to surgical therapy for fistulous disease and he was the first person to advocate the use of a seton (from the Latin seta, a bristle)<sup>1</sup>. This is the Kshar-Sutra method mentioned by Sushruta in ancient Indian surgical practice.<sup>6</sup> Many drugs have been advised by Sushruta and other Ayurvedic texts for the preparation of Kshara sutra (the medicated thread). Reed, pipe or flute in latin called as 'Fistula'. In simple terms, a fistula can be described as a chronic granulating track connecting two epithelium lined surfaces, either cutaneous or mucosal. Due to the lack of a single appropriate technique for the treatment of fistula- in-ano, treatment must be navigated by the surgeon's experience and judgment. The surgeon has to keep in mind the tradeoff between the extent of sphincter division, postoperative healing rate, and functional loss. Ksharsutra has been used to manage anal fistula from hundreds of years; however, in the literature, ksharsutra were commonly used only for high or complex anal fistula in order to avoid fecal incontinence and recurrence.

**METHODS**

This is a single case study of patient with High anal

fistula in ano who attend our Akhandanand Ayurveda Hospital OPD. In this case after all pre operative major profile ksharsutra treatment with partial fistulectomy was done .For accurate diagnoses we also advised him for Trans- rectal Sonography. Followed over a period of 1 years.

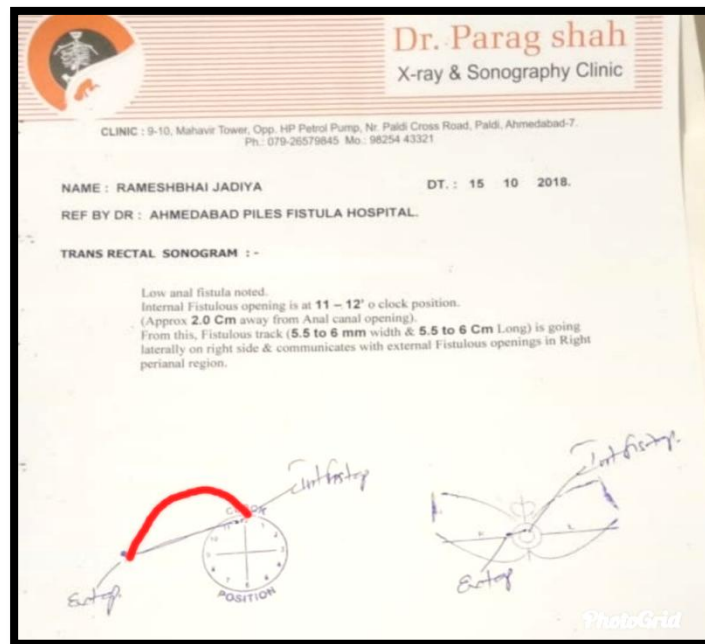
**TECHNIQUE**

In the operation room, under spinal anesthesia patient was evaluated in the lithotomy position. proctoscopy was done prior to any intervention. Betadine with hydrogen peroxide in a 3 mL syringe was used to stain the entire tract by injecting into the external opening using the hub of a 21G needle. The external opening was gently probed using a standard 3 mm blunt-tipped copper probe with an eye but probing not done through previously identified internal opening. Copper probe is used because it is highly malleable. After that coring started and fistulous track cored out till external sphincter with clinical judgment and after that passing the copper probe through internal opening and infrasphincteric part of fistulous tract is excised as done in low anal fistula.<sup>7</sup> Then a Ksharsutra is tied to the eye of the copper probe and the probe is brought out through the anal canal, during the manoeuvre the Kshar sutra is

also dragged along the course of the fistulous tract. Now the Kshar sutra which was brought through the only part of anal sphincters to internal opening, thus traversing the whole path of anal sphincters is tied by ksharsutra. This

is a purely sphincter saving method, Around 3-4 cm part of track is tied over and this took around 6 week for completely cut through. Patient was advised to come for Kshar sutra change weekly once.<sup>6</sup>

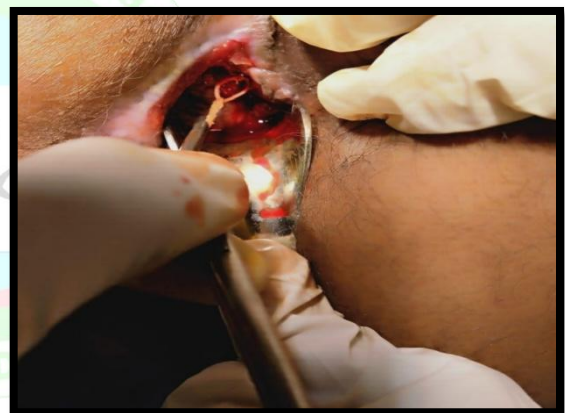
**DISCUSSION**



**Figure 1:** T.R.U.S Report



**Figure 2:** Pre operative



**Figure 4:** Final cut through after 30 days



**Figure 3:** Immediate post operative



**Figure 5:** Almost healed wound after 40 days



**Figure 6:** Healed wound after 60 days

**ETIOLOGY:**

The vast majority of fistulas-in-ano are nearly always caused by a previous anorectal abscess. Other fistulas develop secondary to trauma (eg, rectal foreign bodies),

Crohn disease, anal fissures, carcinoma, radiation therapy, actinomycoses, tuberculosis, and lymphogranuloma venereum secondary to chlamydial infection. In these cases the primary cause should be treated.

**GOODSALL RULE**

**GOODSALL RULE:** The rule states that fistulas with an external opening anterior to a plane passing transversely through the center of the anus will follow a straight radial course to the dentate line. Fistulas with their openings posterior to this line will follow a curved course to the posterior midline (see image below). Exceptions to this rule are external openings more than 3cm from the anal verge. These almost always originate as a primary or secondary tract from the posterior midline, consistent with a previous horseshoe abscess. This rule doesn't help in assessment of the level of fistula based on the location of external opening.

**Park's Classification for Fistula in Ano<sup>4</sup>**

<p><b>Intersphincteric</b> Most common Track confined to IS plane</p>	<p>Type 1</p>	<p>Type 2</p>	<p><b>Trans-sphincteric:</b> Goes through both sphincters</p>
<p><b>Supra-sphincteric</b> Track loops over sphincters, goes through levator</p>	<p>Type 3</p>	<p>Type 4</p>	<p><b>Extra-sphincteric</b> Rectum to skin without involving sphincters</p>



**The St. James University Hospital Classification:**

Another widely used classification system which classifies the perianal fistulas as follows.

Grade 1- Simple linear intersphincteric fistula .

Grade 2-Intersphincteric with abscess or secondary track.

Grade 3- Trans-sphincteric .

Grade 4-Transsphincteric with abscess or secondary track in ischioanal fossa .

Grade 5- Supralelevator and Translevator.

**Investigations:**

x ray

TRUS (Trans rectal ultra sonography)

CT scan

MRI etc

**Physical Examination:** No specific laboratory studies are required in the diagnosis of fistula-in-ano (although the normal preoperative studies are performed, based on age and comorbidities). Instead, physical examination findings remain the mainstay of diagnosis. The examiner should observe the entire perineum, looking for an external opening that appears as an open sinus or elevation of granulation tissue. Spontaneous discharge of pus or blood via the external opening may be apparent or expressible on digital rectal examination.

a) Single-stage seton (cutting).

b) Multi-stage seton (draining/fibrosing).

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Digital rectal examination may reveal a fibrous tract or cord beneath the skin. It also helps to delineate any further acute inflammation that is not yet drained. Lateral or posterior induration suggests deep postanal or ischioanal extension. The examiner should determine the relationship between the anorectal ring and the position of the tract before the patient is relaxed by anesthesia. The sphincter tone and voluntary squeeze pressures should be assessed before any surgical intervention, to delineate whether preoperative manometry is indicated. Anoscopy is usually required to identify the internal opening. Proctoscopy is also indicated in the presence of rectal disease, such as Crohn's disease or other associated conditions. Most patients cannot tolerate even gentle probing of the fistula tract in the office and this should be avoided.<sup>3</sup>

**Modalities for Fistula In Ano Are:**

- Fistulotomy.
- Fistulectomy.
- Seton Placement.
- Mucosal Advancement Flap.
- Plugs and Adhesives
- LIFT Procedure
- Diversion colostomy
- VAAFT procedure

**CONCLUSION**

Ksharsutra is treatment of choice for high anal fistula with least recurrence rate compared to other treatment modalities and can be considered as the gold standard treatment in most of the high anal fistulas.