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Anal fistula with foot extension—Treated by kshara sutra (medicated seton) therapy: A rare case report

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ABSTRACT

INTRODUCTION: An 'anal' fistula is a track which communicates anal canal or rectum and usually is in continuity with one or more external openings. Distant communication from rectum is rare. It is a challenging disease because of its recurrence especially, with high level and distant communications. Ksharasutra (medicated seton) therapy is being practiced in India with high success rate (recurrence of 3.33%) in the management of complicated anal fistula.
PRESENTATION OF CASE: A 56 year old man presented with recurrent boils in the left lower limb at different places from thigh to foot. He underwent repeated incision and drainage at different hospitals. Examination revealed sinus with discharge and multiple scars on left lower limb from thigh up to foot. Suspecting anal fistula, MRI was advised which revealed a long cutaneous fistula from rectum to left lower limb. Patient was treated with Ksharasutra therapy. Within 6 months of treatment whole tract was healed completely.
DISCUSSION: Sushrutha (500BC) was the first to explain the role of surgical excision and use of kshara sutra for the management of anal fistula. Ksharasutra therapy showed least recurrence. Fistula from rectum to foot is of extremely rare variety. Surgical treatment of anal fistula requires hospitalization, regular post-operative care, is associated with a significant risk of recurrence (0.7–26.5%) and a high risk of impaired continence (5–40%).
CONCLUSION: Rectal fistula communicating till foot may be a very rare presentation in proctology practice. Kshara sutra treatment was useful in treating this condition, with minimal surgical intervention with no recurrence.

1. Introduction

Earliest reference about anal fistula is available in Sushrutha Samhita an ancient Indian surgical text book, written in 500BC. Different varieties of anal fistulae have been mentioned, like complicated tracts, curved tracts and fistula with multiple openings or those which take a round path to anal canal.[1] Such fistulae were common in surgical practice. Sometimes it is difficult to diagnose anal fistula, when patient presents with unusual signs and symptoms of disease. Ksharasutra (medicated seton) therapy is being practiced in India with high success rate (recurrence of 3.33%) in the management of complicated anal fistula.[2]

2. Presentation of case

A 48-year-old male patient, petty shopkeeper by occupation, came with complaints of repeated episodes of multiple recurrent boils/abscesses in the left lower limb from thigh to foot, associated with fever and chills. This required hospitalization, IV antibiotics, IV fluids administration, incision and drainage 4 times under spinal anesthesia at different hospitals of Bangalore India, from 2005 to 2008.

At fifth such episode, he visited our hospital OPD. On examination-there was sinus in left mid-thigh. There was no opening in peri-anal region or ischiorectal fossa. There were multiple scars of earlier incisions in left leg and foot (Fig. 1).

Digital rectal examination and proctoscopy was normal except for first degree internal hemorrhoids. Probing was done through the opening of sinus of thigh which was coursing superiorly to gluteum and inferiorly to popliteal region.

Suspecting fistula with rectal communication, advised for MRI study. This revealed fistulous tract arising in the left perianal region at 5'O clock position extending postero-inferiorly in to the left upper thigh spanning a vertical distance about 18–21 cm (Fig. 2).

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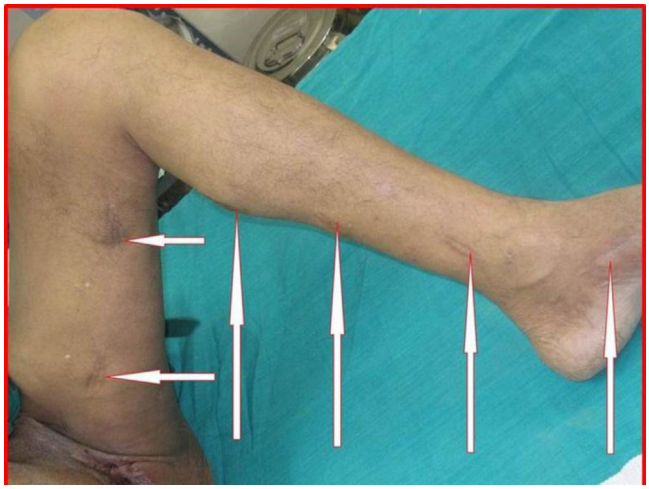

Fig. 1. Left foot-multiple scars of previous incisions and drainage.

As initial part of treatment, from thigh opening ksharasutra was put toward popleteal region making an artificial opening. Ksharasutra was changed every week (Fig. 3). Ksharasutra (medicated seton) prepared by using surgical linen thread no. 20, coated with 11 coatings of latex of Commifera mukul, next eight coatings of latex of C. mukul and alkaline powder prepared out of A. aspera plant. Then three coatings of powder of tubers of Curcuma longa. This is dried, sterilized by UV radiation and packed. Standard technique of method of preparation of ksharasutra, type of ksharasutra, method of threading; changing of thread was followed as per standard protocol of Banaras Hindu University, Varanasi, India.[2]

At 4th week of changing of thread, he developed an abscess in left gluteal region. Incision and drainage was done. Probing through abscess cavity was done. This revealed tract coursing superiorly medially, communicating to rectum at 5'O clock position involving all anal sphincters (Fig. 4).

Primary threading was done for this fistula (Fig. 5). Standard technique of method of preparation of ksharasutra, type of

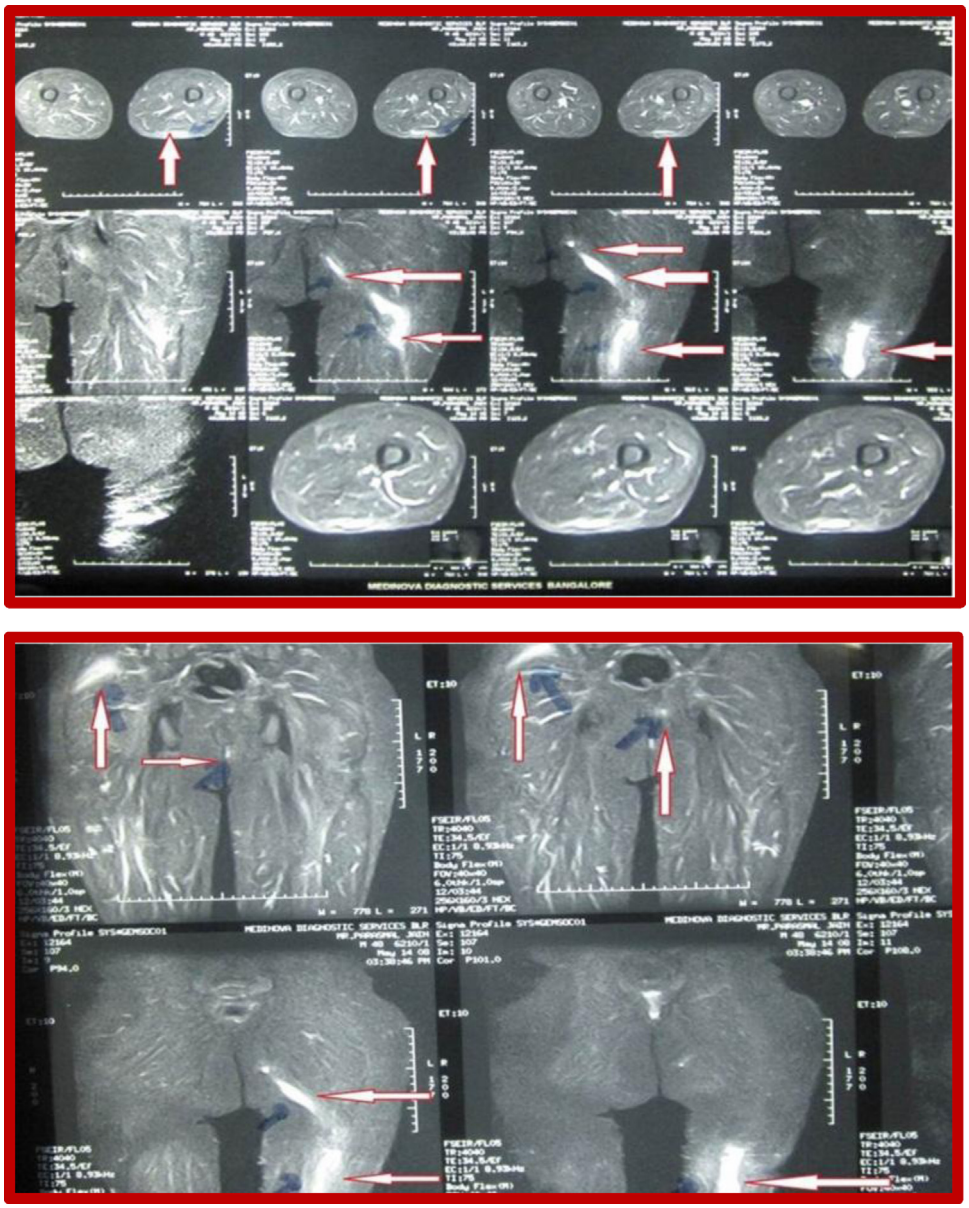

Fig. 2. MRI study revealing extension toward left lower limb.

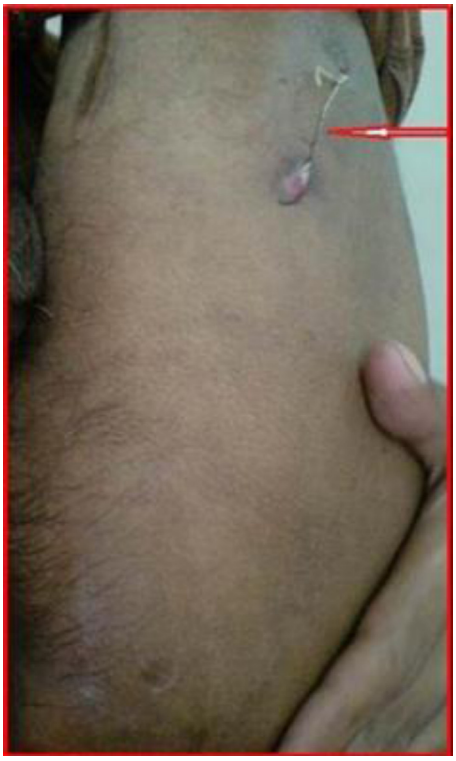

Fig. 3. Ksharasutra placed to the fistula in the thigh-patient is in lithotomy position.

ksharasutra, method of threading; changing of thread was followed as per standard protocol of Banaras Hindu University, Varanasi, India.[2] After 4 weeks of ksharasutra treatment, thread from thigh was removed. In 8 weeks it showed complete closure of thigh opening, discharge became nil and healed completely.

Kshara sutra changing was continued through rectum tract. After 32 times of changing ksharasutra total tract was cut and

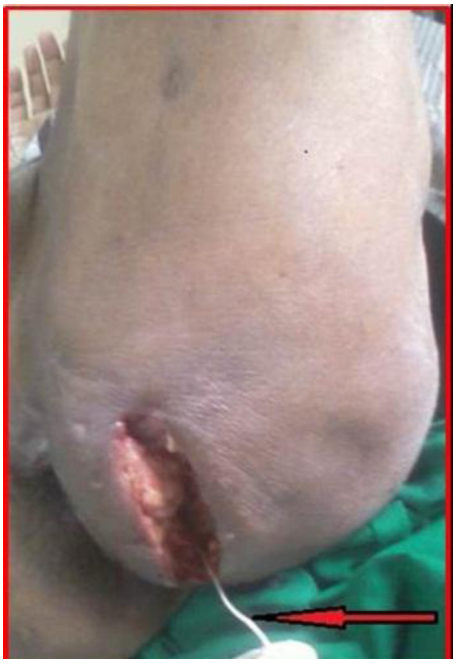

Fig. 4. Tract communicating from left gluteum to rectum-in lithotomy position.

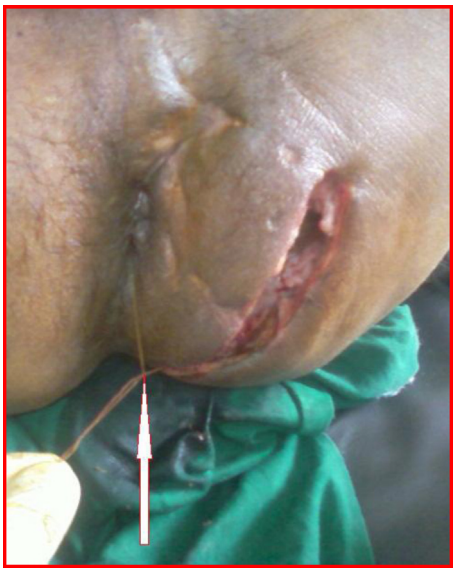

Fig. 5. Primary threading to the fistula was done from left gluteum to rectum.

healed completely. After four years of follow up there was no recurrence (Fig. 6).

3. Discussion

Presentation of anal fistula in clinical practice varies and sometime it is difficult to diagnose. Some unusual anal fistulae were reported earlier, eg: fistula communicating to popleteal fossa.[3] Here in this case though the tract was noticed till level of left thigh on MRI study, there was indication of collection even till foot in earlier episodes of abcess. For such collection or abscess incision and drainage was done several times. Such scars at different levels of lower limb were noticed. This may be an extremely rare case ever reported.

As per the standard treatment of anal fistula, complete tract should be laid open or excised. As per reference of Sushrutha samhita ancient Indian surgical text, ksharasutra treatment was mentioned.[4]

It is an ideal management for the patients of old age or having respiratory or cardiovascular diseases and or otherwise unfit for surgery. No systemic side effects are encountered with Kshara Sutra therapy, although transient infection, local burning sensation, mild pain, itching and slight indurations are observed, which rarely need medication. Post-operative tissue damage and scarring are minimal. The Kshara Sutra therapy, a unique method of drug delivery, most appropriate for healing the fistulous track offers an effective, ambulatory and safe alternative treatment in patients with fistula *in ano*.[2]

In ksharasutra therapy impaired anal continence is nil[7,10] and is high in conventional surgery.[5,8,9] The rate of recurrence of disease in ksharasutra therapy is 3.33%,[2] in conventional surgery it is 26.5% and much higher in high level fistula.[5,6,8]

In this case, small tract at the level of thigh about 2 in., ksharasutra was kept for 4 weeks so that rest of the distal tract was dried up. Neither lay open nor excision was undertaken for limb extension. The thread from sinus present in thigh was also removed after 8 weeks once distal tract toward popliteal and foot confirmed to be dried up or healed. However ksharasutra therapy was adapted, for the tract communicating from gluteum to rectum.

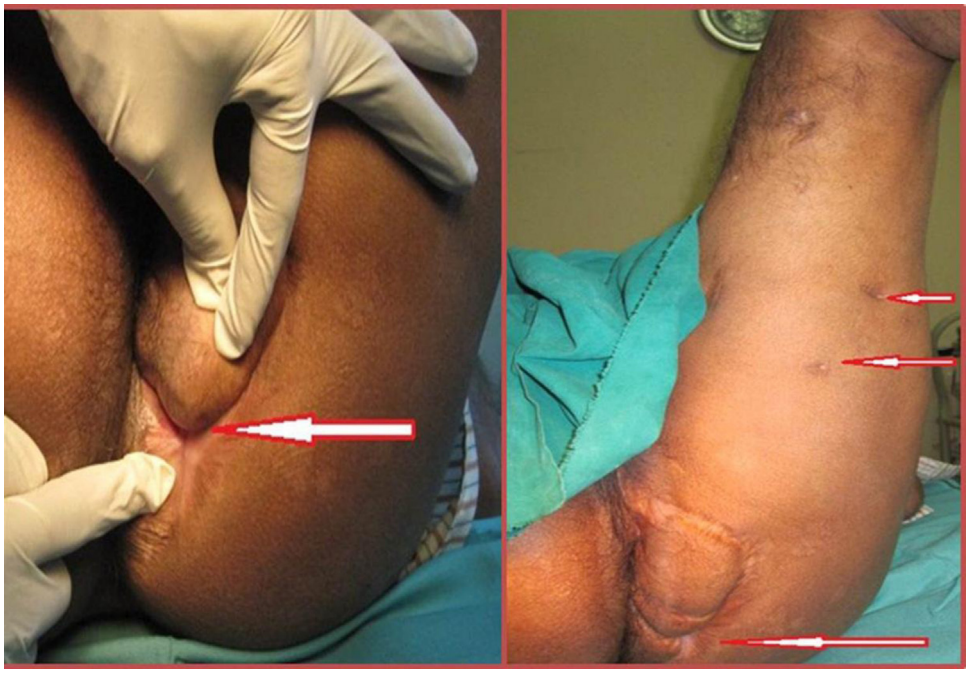

Fig. 6. showing scars of ksharasutra treatment after 4 years with no recurrence.

4. Conclusion

Rectal fistula which has long communication till left foot was a rare presentation of anal fistula. This leads to lot difficulty in diagnosis as patient may take long time to get right treatment for anal fistula.

This rare case was managed with ksharasutra therapy, a very minimal invasive technique without hospitalization, without rest, doing normal work throughout the course of treatment, under local anesthesia, in minor operation theater set up, without incontinence and recurrence when followed up for four years.

Conflict of interest statement

The authors declare that they have no competing interests.

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Not applicable.

Ethical approval

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

Author contribution

T.S. and V.G. drafted the manuscript and cared for the patient.

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