Research Article

EFFICACY OF KSHARSUTRA IN THE MANAGEMENT OF CHRONIC FISSURE IN ANO

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ABSTRACT

The aim of the present study was to evaluate the role of ksharsutra ligation in the management of chronic fissure in ano. Ksharsutra has been in use in the management of fistula in ano successfully and the same has been accredited by Indian Council of Medical Research. Use of ksharsutra was also extended in some other diseases like pilonidal sinus and hemorrhoids by some scholars. Fissure in ano is a ‘cut’ or ‘crack’ in anoderm and it starts from dentate line to end up to anal verge. Chronic fissure in ano contains triad that is chronic ulcer, sentinel tag and hypertrophied anal papilla. Fissure occurs on account of fragility in anoderm due to anal gland infection; hence, root cause should be removed to check recurrence. Ksharsutra ligation destroys the crypto glandular infection, so also the fissure in ano. A part of the internal sphincter is also cut by this application; hence, partial internal sphincterotomy is also performed. It relieves the increased anal sphincter tone. In this way, the pain is relieved immediately after application. It was observed that the chances of recurrence were not significant by this methodology of ksharsutra application.

Keywords: Fissure in ano, Ksharsutra, Crypto glandular infection, ulcer in ano, fissure triad

INTRODUCTION

Fissure in ano or parikartika in ayurveda is by far the most common cause of severe pain in anus during and after defecation. Peri means sarvato or all around and kartana means cutting; hence, cutting pain all around the anal canal is most accepted and important clinical symptom. It is a linear crack in anoderm which can be seen on inspection by separating the buttocks and gentle stretching the anal canal horizontally. [Figure 1]

Figure 1: Demonstration of fissure in ano while patient in lithotomy position

In Ayurveda, it is said that parikartika occurs on account of a complication of virechana. It also occurs due to trauma by nozzle of enema. It is a symptom seen in vataja atisara and it signifies the role of hard stool trauma in the genesis of fissure in ano. It also occurs as a complication of basti procedure. In all these conditions, two mechanisms play an important role – trauma caused by hard stool and narrow passage and fragility of anal canal.

Etiopathogenesis.

- Anal infection theory – due to crypto glandular infection
- Tearing of anal valves – hard stool trauma
- Loss of elasticity – infection and fibrosis
- Laxative abuse – fibrosis in anal canal
- Iatrogenic – incorrectly performed surgical procedures
- Straining during parturition

Clinical features.

- Pain – persists for hours after defecation
- Two patterns – starts after defecation and starts during defecation
- Bleeding – acute fissure
- Constipation as a sequel (laxative abuse)?
- Reflex symptoms – dysuria, dysmenorrhoea

Physical examination

Inspect the anterior and posterior aspect of anal canal by gentle stretching. It is better not to perform per rectal digital examination in acute fissure in ano. If it is, then apply lignocaine jelly and ask the patient to relax and then gently introduce the pulp of finger in anal canal. Feel the fissure bed, sphincter tone, any anal papilla etc. Proctoscopy should be avoided. [Figure 2]
Chronic fissure in ano is characterized by presence of large fibrosed ulcer along with sentinel tag at outer end in skin and a hypertrophied anal papilla in inner aspect covered by mucosa. [Figure 3, 4]

**Management:**

The fissure in acute stage may be managed by conservative medical means such as sitz bath, local application of medicaments, bowel regulation etc. If medical treatment fails then surgical treatment is preferred. The commonly used methods are anal dilatation, sphincterotomy etc. In chronic fissure, the surgery is treatment of choice but it carries morbidity in terms of hospital stay and resuming normal work. Ksharsutra application in chronic fissure in ano is devised in such a way that it can be carried out a day case procedure and the patient can go back home after the procedure. The bleeding is negligible. Post operative complications are negligible and patient can resume duties the 3rd or 4th post application day. It is a single sitting procedure. The recurrence is almost nil.

**MATERIAL AND METHODS**

The study was conducted in department of Shalya tantric, A & U Tibbia college, Karol Bagh, New Delhi and results of ksharsutra applications were analyzed on initial 10 patients. The application procedure, post operative regime was same in all patients. The patients of inflammatory bowel diseases, diabetes mellitus, anaemia and patients suffering from communicable diseases were excluded from the study and anterior and posterior primary chronic fissures were included in study. Acute fissure in ano patients were also not included in the study.

The desired investigations were carried out like complete blood counts along with blood sugar, HIV, Hepatitis B and C were carried out. Vitals of the patients were checked pre and perioperatively. The procedure of ksharsutra applications were carried out by using local anaesthesia. No manual dilatation was carried out and only ksharsutra was placed.

**Method of ksharsutra application**

The patient was laid down on operation table in lithotomy position. The part was prepared and the area draped. Local anesthesia was given in the form of lignocaine 1% in fissure bed and sentinel tag. The sentinel tag was held with the help of an Allis or pile holding forceps. A long one foot length ksharsutra was taken on needle as a double thread. [Figure 5] The needle was long enough (30 to 40 mm) to pierce beyond dentate line.

The first bite of the needle was made just lateral to sentinel tag on left and it was taken deep up to dentate line including the left lateral wall of the fissure bed and internal sphincter fibres. The needle came out at left lateral aspect of anal papilla (if any) and at apical end (proximal end) of fissure bed. [Figure 6, 7]
The ksharsutra was then seen to be piercing the left lateral aspect of the fissure including internal anal sphincter. The needle was advanced and came out of wound and it was then redirected from inside out on the right lateral aspect of the fissure bed. The bite was made just proximal to fissure at dentate line and directed towards the right later aspect of sentinel tag. [Figure 8, 9]

Figure 8, 9: Needle from inside out at right lateral aspect of fissure

After needle came out at right lateral aspect of sentinel tag, the needle was separated from the ksharsutra. [Figure 10]

Figure 10: Ksharsutra is separated from the eye of needle

At this stage, there were two loops of ksharsutra around the fissure. The one loop was cut at the proximal end of fissure and one loop was remained as it was. [Figure 11]

Figure 11: Cut end of one loop of ksharsutra

The cut ksharsutra was having two halves and each of these halves was used to tie the both sides of fissure bed – the right and left. These halves also included the fibres of internal sphincter; hence, a modified sphincterotomy was also performed. [Figure 12, 13]

Figure 12: Tying the knot of ksharsutra – left side

Figure 13: Tying the knot at right aspect

In the remaining loop the entire fissure bed, hypertrophied anal papilla and sentinel tag was also included. Prior to ligation, a releasing incision was given around sentinel tag for effective ligation. [Figure 14]
Figure 14: Releasing incision at base of sentinel tag

It was followed by ligation of fissure with sentinel pile. [Figure 15] The sentinel tag was excised after the ksharsutra ligation and the wound was dressed. [Figure 16]

Figure 15: Ligation of fissure – final phase

Figure 16: Excision of sentinel pile

After the dressing of the wound, the patient was asked to take rest for half an hour in a bed and after examining the wound, the patient was allowed to leave for home. Matra basti, local pastes, sitz bath, bowel regulators were advised and diet explained.

The patients were asked to come up for follow up after a week and results were noted in each and every case. The second follow up was done after a fortnight for any complication.

RESULTS AND DISCUSSION

The problems in management of chronic fissure includes chronic fibrosed ulcer, spasm of the anal canal due to sphincter spasm and associated sentinel pile and anal papilla. Although, surgical management is also a choice but it carries significant morbidity and long time of recovery along with inflated cost of surgery. Ksharsutra ligation of chronic fissure is a safe, ambulatory, OPD procedure that is a good alternative to surgical management.

The benefits of ksharsutra ligation include:
- No need to get admitted in hospital
- The procedure can be performed in local anaesthesia
- No post-operative bleeding as the wound is secured from all sides
- Minimal pain on account of release of sphincter spasm
- Minimal medicines are required and local treatment is sufficient
- Resume of duties at the earliest
- Cost effective procedure
- No untoward effects were noted and quality of life improved.

The resultant wound after 7th post-operative day was healthy and wound healed between 7th to 10th post-operative days. The sphincter was relaxed and patients did not complain any pain after the procedure. [Figure 17]

Figure 17: Condition of wound and relaxed anal canal

The most important aspect of the procedure was that there was not any incidence of bleeding on account of circumferential closure of wound of fissure. The ksharsutra in most of the cases came out on 4th post-operative day. The wound remained healthy with granulation tissue. The exposed fibres of internal sphincters were also cut through and the wound was healed uneventfully.

No major complications were noticed during and after the procedure. The patients were satisfied by the procedure.

CONCLUSION

Ksharsutra ligation of chronic fissure is a good alternative to surgery as it carries less risks and it is easy to perform. The complications are almost negligible and wound remained healthy after application. There are not any chances of bleeding in this procedure. Hence, it is a good procedure to manage chronic fissure in ano.

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