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ORIGINAL ARTICLE

Kshar-Sutra—New Operative Technique for Low Anal Fistulae in Infant

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ABSTRACT

Anal fistula in infants is a common disease. Although many are recovered by conventional treatment, there are some patients who are not repaired easily. We performed the Ksharsutra method to an anal fistula and report the good result that we obtained.

INTRODUCTION

Fistula-in-ano in infants is a condition that results from acute purulent inflammation of the anal region with the formation of an abscess that drains spontaneously. However, the details of the pathogenesis remain unknown. The condition has been reported to occur preponderantly in the male population, and the commonest sites of occurrence are in the lateral aspects of the anus (the 3- and 9-o'clock positions). Many patients show spontaneous remission of the fistula. The condition is primarily treated by conservative methods; however, refractory cases may occasion- ally need surgical treatment. We used a seton for the treatment of fistula-in-ano in infants and obtained favor- able results.

MATERIALS AND METHODS

Five infants with fistula-in-ano (5 lesions) received treatment with akshar sutra (medicated seton)at the outpatient clinics of pediatric surgery at S.S. Hospital, Varanasi between 2014 and 2016 . The therapeutic outcome of the treatment was determined by examining the infants' clinical records retrospectively. This case in which an anal crypt, that is, the primary orifice, was confirmed to show distinct formation of an abscess (a distinct fistulous tract) during the period of ambulatory treatment of suspected perianal abscesses and fistula-in-ano was diagnosed as having a fistula-in-ano.

Treatment with a kshar sutra (medicated seton) was conducted as follows in infants with anal fistula in whom an anal crypt, that is, the primary orifice, could be confirmed: The treatment with a medicated seton was conducted under surface or local anesthesia (without general anesthesia) as follows: A 17-gauge blunt needle was inserted from the secondary orifice to the primary orifice while the fistula was confirmed, and the needle was introduced into the crypt on the side of the primary orifice; a medicated setonkshar sutra was inserted into the end of the blunt needle and ligated

outside the anus (Fig. 1). The initial ligation was performed to avoid any additional tension to the skin, and the extent of ligation was gradually increased.

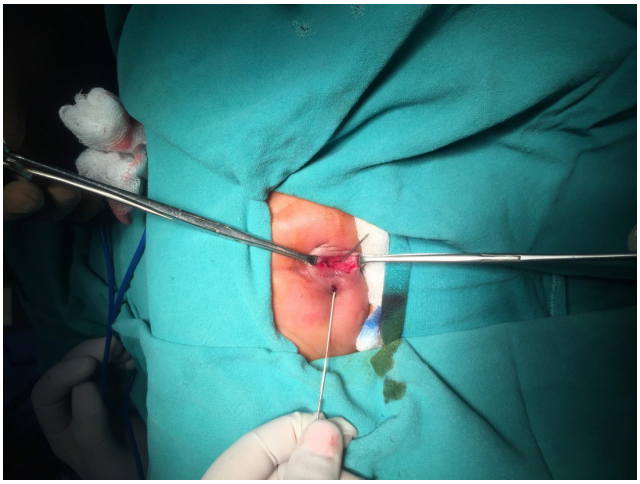

Fig. 1: showing low anal fistulae at 9 o' clock position

An acetaminophen suppository was prescribed for analgesia of postseton treatment pain. The time-point at which dissolution of the ligation thread and epithelialization of the wound with an open fistulous tract were recognized was designated as representing completion of the treatment with a seton. Follow-up examinations were conducted weekly after the treatment.

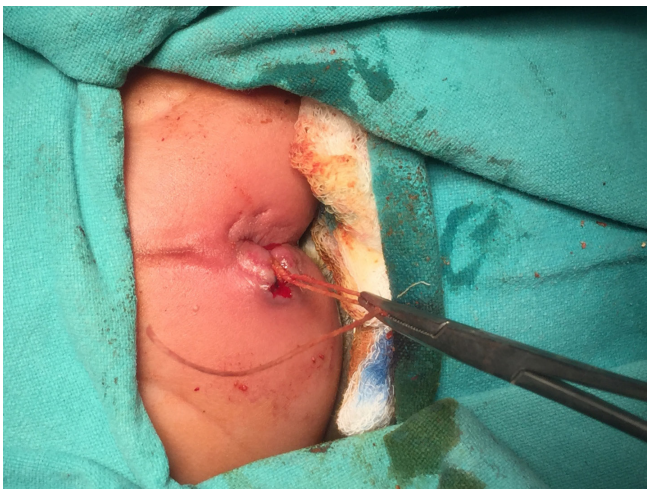

Fig. 2: Showing application of kshara sutra application

Fig. 1 A 17-gauge blunt needle was inserted into the secondary orifice without anesthesia, and the needle was pushed out to the primary orifice; a 2-0 silk was ligated outside the anus.

RESULTS

The age at onset of the condition ranged from 1 to 9 months, with the mean age at 4.6 months. All the patients in this series were boys. All patients have one lesion. The lesion was present at the 3-o'clock position in 2 patients, 9 o'clock in reaning 3 patients. All the patients had been diagnosed to have perianal abscesses on initial examination.

Fig. 3: Shows healed scar

All but one patient, who experienced spontaneous abscess drain-age, received incision and drainage of the perianal abscesses on an outpatient basis at our hospital. Antibiotics were administered to 3 patients, that is, 60% of the total. None of the patients had complications such as immuno-logical abnormalities. A crypt at the primary orifice was confirmed thereafter in all the patients who were diagnosed to have fistula-in-ano 1 to 4 weeks (2 weeks on average) after the initial examination.

When the diagnosis was made, the lesion was treated with a ksharsutra on an outpatient basis. The time of falling-off of the medicated thread (the time of opening of the fistula) was 1 to 7 weeks (3.1 weeks on average) after the placement of the seton. Pain was recognized after the ksharsutra placement in one patient in whom the thread was ligated again on the day after the development of the pain. There were no other complications of placement of the seton. The prescribed suppository was not used by any of the patients). No recurrence was found in two year follow up. The observation period was 4 to 16 weeks (6.5 weeks on average) after full healing of the fistula.

DISCUSSION

We treated infants with fistula-in-ano with a Ksharsutra and retrospectively examined their medical records to determine the therapeutic outcome. It was concluded that treatment with a ksharsutra is a relatively simple procedure and a safe effective treatment method for fistula-in-ano.

Although fistula-in-ano in infants is a relatively frequently encountered condition in clinical practice, its precise pathogenesis remains unclear. In general, it is believed that the condition occurs more frequently in boys and that fistula-in-ano occurring in children younger than 6 months often regresses spontaneously before the age of approximately 1 year[1]. Under these circumstances, the treatment is primarily conservative; and some recent reports have also shown that aggressive conservative therapy is safe and adequately effective[1,2]. In clinical practice, however, there are some cases of fistula-in-ano that are refractory to the usual conservative treatment. It then takes much time for these fistulae to heal, and conservative treatment alone may not always be sufficient in these cases. One report has suggested that surgical treatment might be useful in such cases.[3] Surgical treatment of fistula-in-ano in infants consists mainly of fistulotomy and excision of the fistula; and many reports have shown that these procedures are relatively easy and effective, with a very low complication rate[3-7]. Refractoriness or recurrence of fistula-in-ano is often associated with the presence of abnormal anal crypts[3,6-8], and this finding provides evidence of the necessity of surgical treatment. The usefulness of Ksharsutra placement for treatment has been established for anal fistulae in adults, but not in infants**.** Gonzalves Pinera *et al.*[9], who conducted treatment with a seton in 6 patients with anal fistula, reported that there were no complications, including fecal incontinence or recurrence, with such treatment. Because in most infants fistula-in-ano develops at the lateral aspects of the anus and the fistulae are usually linear, treatment with a ksharsutra is considered to be a good therapeutic option for anal fistulae with abnormal crypts requiring treatment. Under these circumstances, we investigated infants with fistula-in-ano treated with a Ksharsutra. In our hospital, infants with recurrent or refractory fistula-in-ano who are younger than 1 year and have a distinct anal crypt, that is, the primary orifice, are regarded as having indications for treatment with a seton. The primary alternative therapy for those older than 1 year is surgery. Some reasons for inclusion of infants younger than 1 year.

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