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General Surgery

A study on Use of Seton for the Treatment of Anal Fistulae

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ABSTRACT **Aim:** A fistula can be defined as an abnormal communication between two epithelial lined surfaces, in the case of anal fistula, usually between the anal canal and perianal skin. Fistula in ano can be treated by either fistulotomy or fistulectomy. We described the routine use of Seton to treat anal fistula without any surgery. Materials and Method: In this study, 50 cases of Anal Fistulae were taken with any age. Study was done in surgery department of JLNMCH, Bhagalpur, Bihar from April 2016 to March 2017. All cases were registered fulfilled the inclusion criteria and exclusion criteria. Results were analysed statistically. Patients with diagnosed anal fistulae were treated using seton alone. Results: The average age group were 30. Male were 40 and females were 10. The fistula was completely healed by this method in 40 patients (80%). There were no post procedure complications. There was no Post operative pain noted in any patients. No patient developed any faecal incontinence. Five patients developed recurrent fistula. Mean hospital stay was 2 days. Conclusion: The routine seton method is safe, cheap and effective in the treatment of anal fistula regardless of type. It does not leave an open wound and most patients are satisfied with the treatment.

KEYWORDS : Seton, Fistula in ano, cryptoglandular, fibrosis

INTRODUCTION

Fistula in ano is a very common disease seen in the general population. Anal fistula has been described virtually from beginning of medical history. Hippocrates in about 430 B.C., suggested that the disease was caused by "contusions and tubercles occasioned by rowing or riding on horseback". He was the first person to advocate the use of a seton (from the Latin seta, a bristle) in treatment. The early drainage was advised and fistulotomy described even before matter is fully formed. Medicated setons were used much earlier by Sushruth. The treatment of this condition still poses a surgical problem due to its tendency for recurrence and the risk of causing incontinence. Anal fistula disease is not uncommon in adults and has its maximum incidence between the third and fifth decades (Seow-Choen and Nicholls 1992). It is more common among men and the male: female ratio is at least 2:1. Sainio demonstrated an overall annual incidence of 8.6 / 100000 in a defined population over a ten year period (Sainio 1984). Anorectal abscess and fistula can be considered as two phases of the same disease with abscess in the acute phase and fistula as a chronic condition. Approximately 40-50 % of patients treated with incision of an acute anorectal abscess develop or have an underlying anal fistula (Vasilevsky and Gordon 1984). A bacterial culture from the abscess can provide an indication of the risk for subsequent fistula: an underlying fistula was determined in 54 % of patients with bacteria of intestinal origin but none in patients where the bacteria were of dermal origin (Grace et al. 1982). The majority of anal fistulas are of non-specific origin and are usually termed idiopathic or cryptoglandular. The cryptoglandular hypothesis states that infection arises in the anal glands at the dentate line, as an intersphincteric infection, and from there may progress by different routes (Parks 1961). There is little information in the literature about risk factors for the development of idiopathic anal fistula. Among the specific causes of anal fistula, inflammatory bowel disease, especially Crohn's disease, is a major one. In several reported series, the incidence of anorectal disease is 40-50 % in patients with large bowel Crohn's disease and the incidence of anal fistula in Crohn's disease is 10-30 % in most series (Gordon and Nivatvongs 1999). Other specific causes of fistula are trauma, including surgery and obstetric events, specific infections such as tuberculosis, pelvic inflammatory processes, foreign bodies and malignant diseases. The predominant classification system is that described by Parks et al 1976, which classifies the fistula according to the primary tract's relation to the external and internal sphincters and the levator ani muscle. There are four categories: intersphincteric, transsphincteric, suprasphincteric and extra sphincteric fistulas. A seton (from the Latin seta = bristle) is a thread of foreign material that is passed through a fistula tract and tied into a loop. In curative fistula surgery setons are used when the amount of muscle encircled by the fistula tract is considered too large to be divided due to the risk of incontinence. There are mainly two methods: the cutting seton and the two-stage seton fistulotomy. The cutting seton is tied tightly around the encircled tissue and then retied with 2-4 week intervals - gradually dividing the muscle by pressure necrosis. The seton in the staged procedure is tied loosely and left in place for six weeks or more until the remaining fistulotomy is performed. The theory behind both methods is that the seton will cause fibrosis and scar formation to reduce retraction of the divided muscle, and thus prevent incontinence when the muscle is finally divided. Recurrence rates are low, similar to the rates for fistulotomy, but continence disturbances are not uncommon.

MATERIAL AND METHODS

In this study, 50 cases of Anal Fistulae were taken with any age. Study was done in surgery department of JLNMCH, Bhagalpur, Bihar from April 2016 to March 2017. All cases were registered.

Inclusion criteria- The patients who are clinically diagnosed as fistula- in- ano in all ages and both sex who are subjected to relevant investigation

Exclusion criteria- All fistulas due to perineal injuries, All congenital fistulas, Cases unfit and refused for surgery.

Surgical technique- The procedure was performed under general anaesthesia with the patient in the lithotomy position. After initial evaluation, the external and internal opening were located using a probe. A loose-elastic seton was placed around the external sphincter. It was not tightened at any time during the follow-up and was not removed until the internal orifice had migrated towards the perianal skin and discharge from the wound has ceased.

RESULTS

The average age in the group was 30years (range: 15-65). Male were 40(80%) and females were 10(20%). The fistula was completely healed by this method in 40 patients (80%). There were no post procedure complications. There was no Post operative pain noted in any patients. No patient developed any faecal incontinence. Five patients

developed recurrent fistula. Mean hospital stay was 2 days. All patients were followed for at least 6 months. All patients were continuously followed-up until the wounds were completely healed. The mean interval from the operation to removal of the seton was 2 months. Before removing the seton discharge was minimal in all patients. Five patients required fistulectomy subsequently.

DISCUSSION

In our study fistula-in-ano was more common in 25-35 years age group. Kyung won Kang, et al. had majority of patients in the third to fifth decade of life (75.1%). The age distribution and male predominance (87%) seen in this series are similar to most other series. In our study surgery is avoided and an conservative approach was used to treat fiatula in ano. Many of the patients were satisfied by the treatment. Thompson and Ross reported a total healing rate of 44% in a series of 34 patients with a trans-sphincteric fistulas while Kennedy and Zegarra reported primary healing in 78% (66% and 88% for anterior and posterior anal fistulas) . Cohen et al. determined the long-term outcome after the use of loose-seton technique in 20 patients having a minimum follow-up of 10 years and a median interval of 6 months from surgery to removal of the seton. However, 13 of 16 patients needed further surgery for recurrence of the fistula or perianal sepsis. Thus in this report, the success rate fell with the passage off-time. Bickel et al. reported a 5% rate of continence disturbance with the loose-seton technique [10] and other publications indicate that a degree of post-operative faecal incontinence occurs in 0–8% with minor disturbances occurring in 60% of the cases. Lentner et al reported the result of long-term indwelling seton low transsphincteric and intersphincteric anal fistula. In his series of 108 patients, a seton using nonabsorbable suture was tied loosely through the fistula tract. The author reported a very low recurrence rate (3.7%) with minimal risk of incontinence. Only 12 patients in the series required in-patient treatment and the overall mean hospital stay was 0.3 day. However, the treatment was prolonged with a median of 13 months and a significant proportion of patients (44%) required another operation for the residual fistulous tract.

CONCLUSION

In conclusion, the routine seton method is safe, cheap and effective in the treatment of anal fistula regardless of type. It does not leave an open wound and most patients are satisfied with the treatment. It provides an alternative to the conventional operative treatment for all anal fistulae.

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