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Management of Fistula-In-Ano: A local Experience

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ABSTRACT

Objective: To evaluate short and long-term outcomes of complex fistula surgery.

Patients and Methods: This cross-sectional study was conducted on all patients, both male and female admitted to General Surgery Department of PIMS, Islamabad who underwent surgery for fistula-in-ano from 1st January 2010 to 31st December 2015. A total of 65 patients, who underwent surgery for fistula-in-ano in the hospital were included in this study. They were assessed by case review supplemented by OPD follow up and telephonic interview when necessary.

Results: A total of 65 cases of fistula-in-ano were operated in the surgical unit of the hospital. Out of the total patients, 27 patients were operated once, 29 patients were operated twice and 9 patients had surgery three times. Almost about half of the patients (45 %) had trans sphincteric complex fistula with secondary tract identified in 40% cases, 16 % cases with intra sphincteric, 36% cases with extra sphincteric, 3% case with horseshoe shaped and 5% with a combination of two. In 45 % of the cases, excision of primary and secondary tracts were done with loose seton placement while preserving the sphincter complex. About 36 % cases had excision of the tract while in horseshoe cases fistulotomy was done. In 4 % of cases primary excision of the tract and repair of the sphincter complex was performed. In two patients, drainage and curettage of presacral abscess was done. We made colostomy in one patient after 4th recurrence while one patient was having colostomy before operation that was operated 6 times for fistula. No incontinence was reported for solid and liquid, while 12.3 % cases had transient flatus incontinence, 9.2 % cases presented post-operative bleeding in which 4 % of patients settled with pressure dressing while 5.2 % required control of bleeding under GA.

Conclusion: Majority of the complex fistula in-ano treated by primary fistulotomy or stage fistulotomy with a loose seton are followed by good clinical and functional result.

Key words: Fistula in ano. Fistulotomy, Fistulectomy, Loose seton

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Introduction

Fistula-In-ano (FIA) has been a common surgical ailment reported since the time of Hippocrates but little systematic evidence exists on its management.[1] A complex FIA is defined as a fistula whose treatment poses an increased risk of change incontinence, multiple external openings, indurations felt above the puborectalis, on probing from external opening tract travel towards the levatorani instead of anus, when tract involve greater than 30% to 50% of the sphincter mechanism and is anterior in woman or the patient has a history pre-existing incontinence, crohn's disease or local irradiation.[2] Infection developing in an anal gland lying within the submucosa of the anal canal is a direct cause of most FIA(cryptoglandular fistula).[3] It can be associated with number of conditions, including tuberculosis, crohn's disease and malignancy.[4]

The estimated prevalence of nonspecific FIA is 8.6 to 10/100,000 of the population per year, with a male to female ratio of 1.8:1.[5] It is a distressing condition for the patient and can be surgically challenging.[6] In 1976, Sir Alan Parks classified FIA depending on the relationship of the tract to the anal sphincter. In total, four types of tracks were described, inter-sphincteric (45%), trans-sphincteric (29%), supra-sphincteric (20%) and extra-sphincteric (5%).[6] Results of treatment of FIA are still far from satisfactory, even in centers experienced in its treatment.[7] Recurrence rate varies from 0% to 32% and the incidence of postoperative gas and stool incontinence may reach 63%.[7] Present study was designed to evaluate, the short and long term outcomes of complex fistula surgery.

Patients and Methods

A total of 65 consecutive patients who underwent surgery for FIA between 1st January 2010 to 31st December 2015 were included in the study. Our analysis included the following parameters: patient's gender and age, duration of symptoms, types of FIA and also the number of single- and multi-tract FIAs (including horseshoe-shaped fistulas). Detailed medical history was obtained prior to surgery, focusing on previous proctological procedures for conditions other than FIA. We analyzed the kind of surgical procedures most often associated with particular types of FIA, other proctological procedures performed simultaneously for concomitant diseases, as well as types and incidence of early and late postoperative complications. We also assessed the effectiveness of surgical techniques implemented in the treatment of particular FIA types and duration of hospital stay associated therewith. Prior to surgery, all patients underwent digital rectal examination and proctoscopy to localize the internal opening of their fistula and to evaluate large-bowel mucosa for any coexisting diseases. Whilst most complex fistulae require the use of imaging modalities such as contrast fistulography, or magnetic resonance imaging to correctly classify the primary and secondary tract, the level of internal opening and associated pathology. Almost 85% can be correctly diagnosed by careful examination under anesthetic and the judicious use of probes.

All procedures were performed by a specialist general surgeon. Early in the series, spinal anesthesia was predominated; Full relaxation was avoided to enable the surgeon to appreciate the extent of the anorectal ring. When the internal opening was difficult to identify, either dilute methylene blue or hydrogen peroxide was injected through the external opening to assist its localization. The operative procedures included simple fistulotomy (laying-open technique), fistulectomy of secondary tract cutting seton technique (sequential office-based seton advancement), and draining seton technique. The draining seton patient had placement of the seton as if prepared for the cutting technique. However, the fistulotomy was maintained without tightening for at least 5 weeks or until the inflammatory response receded. At this point, EUA was done and the seton was removed, and the patient was followed-up expectantly. Post-operatively, the wounds were managed by twice-daily digitation and irrigation rather than by tight packing. Patients were followed up on the ward 3rd day and 1st week after surgery. This allowed the wound to be inspected and checked for postoperative bleeding and infection. Thereafter, patients were seen in outpatients on weekly basis for 1st month than fortnightly up to 6-monthly interval at our Outpatients' Clinic, until fistula was healed. Thereafter, Patients were assessed for symptoms and signs of recurrence and also for incontinence if needed. There was a template for the examining doctor to fill in when the patient attended for review. It included wound infection, wound healing period, digitations done continence disturbances, stenosis and recurrence of fistula.

Results

A total of 65 patients underwent surgery for complex fistula during 5 years' study. They were assessed by case review supplemented by OPD follow up and telephonic interview when necessary. The mean age of these patients was 45.3 years ± 9.3 SD. Out of total, 58 (89%) patients were male while remaining 11% (n=7) were female. The patients were clinically proven to FIA for a mean of 11.5 month. (Range =1 to 60 months). Most of the patients presented with perianal discharge (97%), itching and discomfort (60%). Few patients presented with pain. On examination, external opening was found, 80% posteriorly, while 20% it was anteriorly. On digital rectal

examination internal opening was found, 61% at the dentate line and 39% above the dentate line.

Majority of the patients (45 %) had transsphincteric complex fistula with secondary tract identified in 40% cases, 16 % cases with intra sphincteric, 36% cases with extra sphincteric, 3% cases with horseshoe shaped and 5% with a combination of two. In 45 % of the cases, excision of primary and secondary tracts were done with loose seton placement while preserving the sphincter complex. A total of 21 patients of over series with recurrent disease, 90% of recurrent fistula were tertiary referrals from other hospitals and the nature of any previous fistula surgery was, therefore, difficult to ascertain (see table 1 for details of the patients).

Table 1. Findings and Management of patients of Fistula-in Ano (n 65)

Characteristics	N (%)
Male	58 (89)
Female	07 (11)
Post. Ext opening	52 (80)
Ant. Ext opening	13 (20)
Sec. Tract Involvement	26 (40)
Intra sphincteric	10 (16)
Extra sphincteric	23 (36)
Horseshoe shaped	02 (3)
Combination	03 (5)
Patient operated Once	27 (42)
Patient operated Twice	29 (45)
Patient operated more than Twice	09 (13)

We also tried to find out the total number of operations, 27 patients operated one time, 29 patients operated twice, while 8 patients were operated more than two times, though one of our patient was operated 9 times. About 45% of our patients were operated by stage fistulectomy; that is excision of the lower fistula tract and placement of the Seton, followed by daily dressing and digitations of the wound. We came across bleeding in six patients, in which four were managed by pressure dressing and two were explored under anesthesia and bleeding was controlled. In our series the transient flatus incontinence was the commonest (12.3%) complication which got settled with passage of time. Recurrence of disease was found in 7 patients, out of them 2 were re-operated and found to have low fistula-in-ano, while 5 patients were not operated at the time of data collection and were at waiting list.

Discussion

Surgical treatment of FIA should aim at the complete elimination of the fistula while maintaining sphincter muscle function as much as possible.[8] The criteria of determining success or failure of surgery are the incidence of recurrence or incontinence.[9] In this trial a total of 65 patients were treated for complex fistula. Mean age of the patients was 45.3 ± 9.3, while in study of 54 cases, Khalid et-al observed a high incidence in 3rd and 4th decades.[10] In a study of 85 cases, Takayuki et-al found that mean age incidence was 42.5 years which is comparable to that observed in our study. In this study there were 58 male and 7 female patients, with male to female ratio of 9:1. A similar ratio was reported by Saif et-al, in their study, 41 males and 4 females underwent the process.[12] In another study conducted by Buchanan et al. it was found that 17 males and 3 females were having the problem.[13] These results show that male are approximately 9-10 folds at high risk of developing the condition compared to females. This proves male predilection because males have more intramuscular gland than female and they are more ramifying and more cystic.

Most common symptom was perianal discharge 97 % followed by itching and discomfort 60%. Pain, bleeding P/R, and altered bowel habits were other presentations in some patients. Mean duration of symptoms before surgery was 11.5 months (range 1 to 60 months). Khalid and Takayuki et al reported that mean duration of symptoms before surgery was 18 months and 11 months respectively which is nearly comparable to mean duration of symptoms in our study.[10,11] In current study 21 (32.30%) patients were found previously operated for FIA, 90% of recurrent fistula were tertiary referrals from other hospitals. G.N Buchanan et al reported in their study that 19 patients out of 20, had previously undergone fistula surgery.[13] In another study, 29 patients (64 %) out of 45, had previously undergone fistula surgery.[12]

In this study, in majority of cases the fistula was found posteriorly (80 %). In another study of 199 cases, external opening of fistula were found posteriorly observed by Sainio and Husa.[14] In this case series, majority of the

patients (45%) had transsphincteric complex fistula with secondary tract identified in 40% cases, 16 % cases with intra sphincteric, 36% cases with extra sphincteric, 3% case with horseshoe shaped and 5% with a combination of two. While in the study of 160 patients, Vasilevsky et-al reported 41% cases of inter sphinteric,52 trans sphincteric and 1.3 % suprasphincteric.[15] Some surgeons use a seton to drain FIA, whereas others believe that seton placement stimulates fibrosis and therefore promotes healing.[16,17] When a seton is used to mark the primary track the subsequent decision whether or not to lay it open, can be made easier by palpating the seton in relation to the anal sphincter complex.[16] Chemical seton placement may cause more pain than fistulotomy, and there is little difference in functional outcome between the two methods.[18] Use of a cutting seton is also effective, but this too may cause minor disturbance of continence and may necessitate tightening. About 45% of our patients were operated by stage fistulectomy; that is excision of the lower fistula tract and placement of the Seton followed by daily dressing and digitations of the wound. However, in 36% cases, fistulectomy was performed. In 9% cases, fistulotomy was done. While 4% of patients were dealt with excision of the fistula tract and sphincteric repair, and colostomy done in one patient. We come across the bleeding in six patients (9.2%), in which four were managed by pressure dressing and two were explored under anaesthesia and bleeding was controlled.

In our study, transient flatus incontinence was the commonest complication seen in 12.3% cases and it got settled with the passage of time. In another study conducted by Takayuki et al, incontinence was found in 20.3% of their cases.[11] Recurrence of disease was found in 7 patients out of them 2 were re-operated and were found to have low FIA while 5 still unoperated.

Conclusion

The majority of complex FIA patients were treated by fistulotomy and staged seton fistulotomy with a low recurrence rate and low morbidity.

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