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ORIGINAL ARTICLE

Assessment of risk factors for recurrence and incontinence after anal fistula surgery

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ABSTRACT:
Background: Anal fistulae and abscesses of the perianal region are different manifestations of the same clinical disease.The ideal surgical treatment for anal fistula should eradicate sepsis and promote healing of the tract, whilst preserving the sphincters and the mechanism of continence. Hence; under the light of above mentioned data, the present study was planned to assess various risk factors for recurrence and incontinence after anal fistula surgery. **Materials & methods:** A total of 100 patients scheduled to undergo anal fistula surgery were included in the present study. Detailed demographic and clinical data of all the patients was obtained. Anal fistula surgery was carried out in all the patients. Data in relation to the existence of preoperative or postoperative incontinence, and the appearance of recurrences were obtained. All the results were recorded in Microsoft excel sheet and were analysed by SPSS software. **Results:** Transsphincteric type of fistulae was the most common found to be present in 55 percent of the patients. In the present study, total recurrence rate was found to be 13 percent. Maximum recurrence rate was found to be present in Extrasphincteric fistulae, followed by Suprasphincteric fistulae. Incontinence associated factors were found to be highest for extrasphincteric fistula. **Conclusion:** Under the light of above obtained data, the authors conclude that the presence of recurrent of fistula-in-ano (External type) is associated with to non-recognition of the internal fistula opening by the surgeon. However; further studies are recommended.
Key words: Anal, Fistula, Recurrence

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INTRODUCTION

Fistula-in-ano has always tested the patience of even the most experienced surgeons. There has never been consensus on the existing surgeries for the fistula-in-ano, with cryptoglandular origin. Newer conservative surgeries like ligation of intersphincteric fistula tract (LIFT) and video-assisted anal fistula treatment (VAAFT) have mixed success rates and need more studies and long-term follow-up to validate them.[1- 4]The goals in the treatment of an anal fistula are to eliminate the primary fistula opening, any associated tracts, and any secondary openings without a change in continence. Most anal fistulae are simple and can be treated using a fistulotomy, which has a low recurrence rate and an acceptable rate of morbidity. However, the treatment of a complex anal fistula, which is defined as a fistula whose treatment poses an increased risk for a change in continence, still represent a challenge.[5- 7]
Hence; under the light of above mentioned data, the present study was planned to assess various risk factors for recurrence and incontinence after anal fistula surgery.

MATERIALS & METHODS

The present study was planned in the department of general surgery of the medical institute and it included assessment of various risk factors for recurrence and incontinence after anal fistula surgery. Ethical approval was obtained from institutional ethical committee and written consent was obtained from all the patients after explaining in detail the entire research protocol. A total of 100 patients scheduled to undergo anal fistula surgery were included in the present study. Exclusion criteria for the present study included:

- Patients with subfissurary and rectovaginal fistulae,
- Patients with presence of fistulae associated with inflammatory intestinal disease,
- Patients with presence of any malignant haematological diseases,
- Diabetic and hypertensive patients

After meeting the exclusion criteria, a total of 100 subjects were included in the present study. Detailed demographic and clinical data of all the patients was obtained. Anal fistula surgery was carried out in all the patients. Data in relation to the existence of preoperative or postoperative incontinence, and the appearance of recurrences were obtained. All the results were recorded in Microsoft excel sheet and were analysed by SPSS software.

RESULTS

In the present study, a total of 100 patients were analyzed who were scheduled for anal fistula surgery. Mean age of the patients of the present study was 48.5 years. Majority of the patients belonged to the age group of 40 to 60 years. Sixty percent of the patients of the present study were males while the remaining forty percent were females. In the present study, Transsphincteric type of fistulae was the most common found to be present in 55 percent of the patients.In the present study, total recurrence rate was found to be 13 percent. Maximum recurrence rate was found to be present in Extrasphincteric fistulae, followed by Suprasphincteric fistulae. Incontinence associated factors were found to be highest for extrasphincteric fistula.

Table 1: Demographic data

Parameter	**Number**
Number of patients	100
Mean age	48.5
Males	60
Females	40
Mean BMI (Kg/m^2)	26.7

Graph 1: Type of fistula

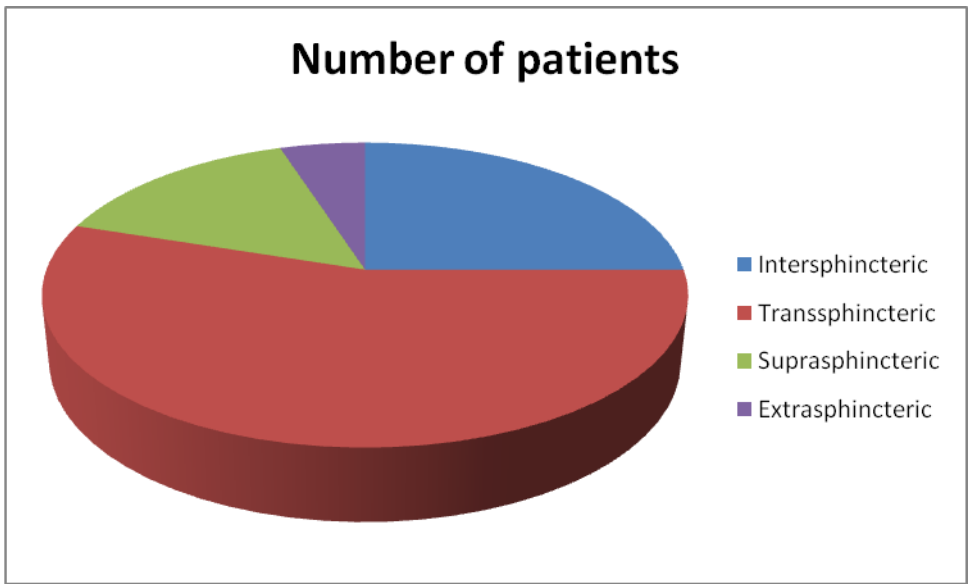

Table 2: Risk factor for Recurrence

Type of fistula	**Number of patients**	**Recurrence**	**p- value**
Intersphincteric	25	2	0.00(Significant)
Transsphincteric	55	4	
Suprasphincteric	15	5	
Extrasphincteric	5	2	
Total	100	13	

Table 3: Incontinence associated factors

Type of fistula	Percentage of incontinence
Intersphincteric	20
Transsphincteric	12.7
Suprasphincteric	26.67
Extrasphincteric	40

DISCUSSION

In the present study, a total of 100 patients were analyzed who were scheduled for anal fistula surgery. Mean age of the patients of the present study was 48.5 years. Majority of the patients belonged to the age group of 40 to 60 years. Jordán J et al evaluated recurrence and incontinence risk factors of Fistula-in-ano. They analysed a series of 279 patients who had undergone anal fistula surgery with long-term follow-up. 42.7% of the fistulae were considered complex and 46% had been referred from other institutions. There was delayed healing or recurrence in 7.2% patients, which appeared at a median of 4 months. The factors associated with recurrence were the type of fistula (extrasphincteric/suprasphincteric), non identification of internal opening (IO), recurrent or complex fistulae (CF), and associated chronic abscess. Only CF and non identification of IO were statistically significant in the multivariate analysis. Preoperative incontinence was a risk factor for postoperative incontinence, as were suprasphincteric, recurrent and CF. The age and gender of the patient did not influence postoperative continence, nor did the surgeon or surgical technique appear as a risk factor, although after excluding preoperative incontinent patients, fistulotomy was the technique that showed a higher risk of incontinence. Multivariate analysis only confirmed previous incontinence as a RF. The overall recurrence rate is acceptable, but high fistulae continue to be difficult to treat. IO identification is also essential for obtaining good results.[10]

In the present study, sixty percent of the patients of the present study were males while the remaining forty percent were females. In the present study, Transsphincteric type of fistulae was the most common found to be present in 55 percent of the patients. In the present study, total recurrence rate was found to be 13 percent. Garcia-Aguilar J et al reviewed the records of 624 patients who underwent surgery for fistula-in-ano between 1988 and 1992. Follow-up was by mailed questionnaire, with 375 patients (60 percent) responding. Mean follow-up was 29 months. Fistulas were intersphincteric in 180 patients, transsphincteric in 108, suprasphincteric in 6, extrasphincteric in 6, and unclassified in 75. Procedures included fistulotomy and marsupialization (n = 300), seton placement (n = 63), endorectal advancement flap (n = 3), and other (n = 9). The fistula recurred in 31 patients (8 percent), and 45 percent complained of some degree of postoperative incontinence. Factors associated with recurrence included complex type of fistula, horseshoe extension, lack of identification or lateral location of the internal fistulous opening, previous fistula surgery, and the surgeon performing the procedure. Incontinence was associated with female sex, high anal fistula, type of surgery, and previous fistula surgery. Surgical treatment of fistula-in-ano is associated with a significant risk of recurrence and a high risk of impaired continence. Degree of risk varies with identifiable factors.[11]

In the present study, maximum recurrence rate was found to be present in Extrasphincteric fistulae, followed by Suprasphincteric fistulae. Incontinence associated factors were found to be highest for extrasphincteric fistula. Ratto C et al evaluated safety and effectiveness of Fistulotomy plus primary sphincteroplasty technique in medium-term follow up and to identify potential predictive factors of success and postoperative continence impairment. A total of 72 patients with complex anal fistula of cryptoglandular origin underwent fistulotomy and end-to-end primary sphincteroplasty; patients were followed up at 1 week, 1 and 3 months, 1 year, and were invited to participate in a recent follow-up session. Of the 72 patients, 12 (16.7%) had recurrent fistulas and 29 patients (40.3%) had undergone seton drainage before definitive surgery. Fistulotomy with end-to-end primary sphincteroplasty can be considered to be an effective therapeutic option for the treatment of complex anal fistulas, with low morbidity, a high rate of success even at long-term follow-up, and a very low rate of postoperative major fecal incontinence, although minor impairment of continence (post defecation soiling) may occur.[12]

CONCLUSION

Under the light of above obtained data, the authors conclude that the presence of recurrent of fistula-in-ano(External type) is associated with to non-recognition of the internal fistula opening by the surgeon. However; further studies are recommended.

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