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Research Article

A descriptive analysis of management of fistula-in-ano

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ABSTRACT

Background: A fistula-in-ano is an abnormal hollow tract that is lined with granulation tissue and which have a primary opening inside the anal canal and a secondary opening in the perianal skin. 90% of the cases, the origin is from crypto glandular infection. Leads to ano rectal abscess and chronic infection causes fistulae in ano. Various techniques have been described for management of fistula in ano but there are risk of recurrence and incontinence.
The objective of this study was to know the usefulness of investigative procedures in early and accurate diagnosis of fistula in ano. And to study the efficacy of different modalities of surgical approach with reference to post-operative hospital stay and complications like pain, bleeding and sphincter in continence and outcome in respect to persistence/recurrence of fistulae.
Methods: A total of 50 patients with clinically diagnosed fistula in ano were included in the study. All patients were subjected to surgical intervention. The study was conducted at V.S. hospital between June 2007 to November 2009. Follow up of the patients obtained up to 1 year.
Results: Commonest age of presentation in our series was 20-30 years. Males were more affected as compared to females. Low level fistula is more common and was seen in 66% cases where as 34%patients had high level fistula. Patients with Seton placement procedure require longer post-operative hospital stay (14.2 days) as compared to other two surgical procedures. Incidences of pain, bleeding and incontinence were more in Fistulectomy as compared to Fistulotomy. But recurrences were found in 4 (8%) in Fistulotomy while not a single case of recurrence was reported in other two surgical modalities.
Conclusions: Fistulotomy has a higher recurrence rate than fistulectomy. But fistulotomy may be preferred for low anal fistulas as it is associated with less chances of incontinence and has significantly less incidence of post-operative complications and is associated with less hospital stay duration.

Keywords: Fistula in ano, Fistulectomy, Fistulotomy, Seton placement, Comparison

INTRODUCTION

A fistula-in-ano is an abnormal hollow tract that is lined with granulation tissue and which have a primary opening inside the anal canal and a secondary opening in the perianal skin. Secondary tracts may be multiple and canextend from the same primary opening. Most fistulas derive from suppurative infections originating in the anal canal glands at the dentate line. The path of a fistula is determined by the local anatomy; most commonly, they track in the fascial or fatty planes. Anal fistula is almost always a consequence of an ano rectal abscess that was drained which represents the acute phase of the disease, fistula represents the chronic phase. Following ano rectal abscess drainage, the fistulous pathway may persist in about 1/3 of cases. Fistulas may be classified according to its etiological factors as: specific or secondary to pathological process, such as Crohn's disease, ulcerative recto colitis, tuberculosis, trauma, and other morbid conditions; and nonspecific or secondary to infection of the anal glands. Most of these fistulae are easy to diagnose with a good source of light, a proctoscopy, and a meticulous digital rectal examination.[1-5]

Despite the easy of diagnosis, establishing a cure remains challenging. No definitive medical therapy is available for this condition, but it has been found that long-term antibiotic prophylaxis and infliximab may have a role in recurrent fistulas in patients with Crohn's disease. Surgery is the treatment of choice, with the goals of draining infection, eradicating the fistulous tract, and avoiding persistent or recurrent disease while preserving anal sphincter function. Conventional surgical modalities for a low fistula-in-ano include a fistulotomy and a fistulectomy and for high level fistula include Seton placement. Despite all these good surgical procedures, there is problem on two accounts. Firstly, many patients tend to let their ailment nag them rather than being subject to examination, mostly owing to the site of affection of the disease. The more important second factor is that a significant percent of these diseases persist or recur when the right modality of surgery is not adopted or when the post-operative care is inadequate.[2,6,7]

The objectives of this study were to know the usefulness of investigative procedures in early and accurate diagnosis of fistula in ano. And to study the efficacy of different modalities of surgical approach with reference to post-operative hospital stay and complications like pain, bleeding and sphincteric incontinence and outcome in respect to persistence/ recurrence of fistulae.

METHODS

This prospective study was performed in the department of general surgery at V.S. hospital in Ahmedabad during June 2007 to November 2009. The study was approved by the Institutional Ethics Committee. A total of 50 patients with clinically diagnosed fistula in ano were included in the study. Prior written and informed consent of patients were taken for inclusion ii the study. Clinical history was obtained in all the patients. Clinical examination including proctoscopy was done in all the patients. Patients were followed up to a period of 1 year.

Cases were selected by following criteria

Inclusion criteria

- Patients of all ages and both gender.
- Patient with clinically diagnosed fistula in ano.

Exclusion criteria

- Patients with ano-rectal malignancy.
- Patient's refusal for surgical intervention when the fistula in ano was demonstrated on clinical examination.

Level of fistula

The internal opening was demonstrated by digital rectal examination, proctoscopy, and injection of hydrogen peroxide or dilutes methylene blue through the external opening or fistula gram.

- Low level fistula had internal opening situated below the ano rectal ring.
- High level fistula had internal opening situated above the ano rectal ring.

Treatment

Patients with low level fistula were treated with fistulotomy and fistulectomy and patients with high level fistula were treated with Seton placement.

RESULTS

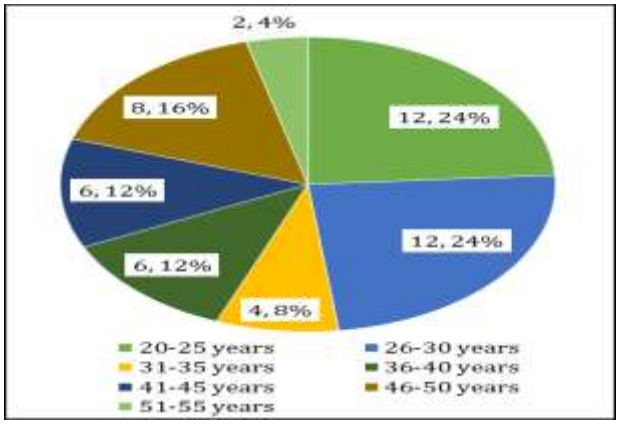

Figure 1: Distribution of the patients according to different age groups.

In the present study it was found that age groups of 20-25 and 25-30 were most commonly (24% each) affected by fistula in ano (Figure 1). Males were more affected than females in this disease (M:F ratio 5:1).12 patients i.e. 24% had similar illness out of them two previously operated for fistula with recurrence. In present study,88% of patients had only one external opening and 12% of patients had multiple external openings. Fistulo gram was done only in 10 cases that had multiple eternal openings, recurrent fistulas and in complex etiologies.

In this study, 66% of patients had low level of fistula and another, 34% of patients had an internal opening situated above the ano rectal ring (Figure 2). Patients with low level fistula were treated with fistulotomy and fistulectomy and patients with high level fistula were treated with Seton placement.

In this study 60 % of patients with underwent Fistulotomy, 12 % of patients Fistulectomy and another 28% Seton placement. Patients with low level fistula were treated with fistulotomy and fistulectomy and patients with high level fistula were treated with Seton placement. Seton placement was associated with the maximum duration of post-operative hospital stay (average 14.2 days) followed by fistulectomy with 10.4

days. Fistulotomy required the least days of post-operative hospital stay with an average of 6.5 days (Figure 3).

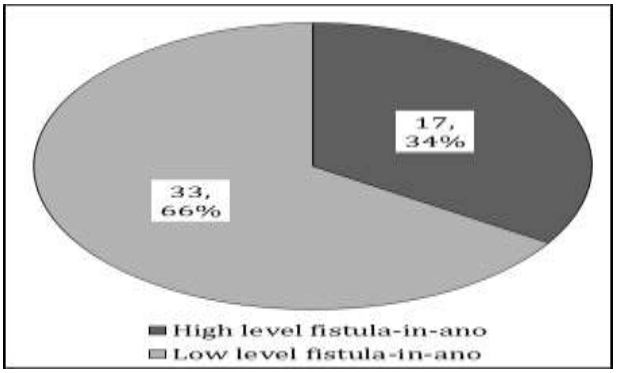

Figure 2: Types of fistula.

Bleeding was controlled in all the cases with pressure dressing only and no further operative management was required. Pain was treated by analgesics and local anesthetic ointment. Retention was relieved by indwelling catheterization. Incontinence of flatus was noticed in 32% of fistulectomy patients and was absent in the other groups. None of the patients in our study developed incontinence of stools. It can be suggested that fistulectomy causes more damage to the sphincter and underlying muscle than fistulotomy.

Fistulotomy has higher incidence of recurrence than fistulectomy as more tissue is left behind. Seton has low rate or recurrence and was nil in the present study it causes minimal damage to the sphincter mechanism and is preferred in high fistulas (Table 1).

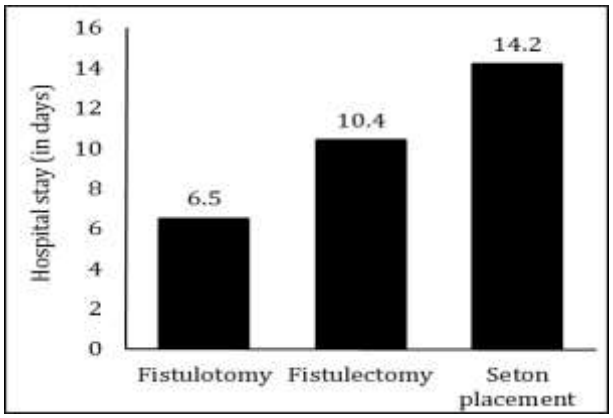

Figure 3: Average duration of post-operative hospital stay (in days).

Table 1: Post-operative complications.

Type of operation	Post-operative complications rate (%)				
	Bleeding	Pain	Urinary retention	Incontinence	Recurrence
Fistulotomy	8	8	8	0	8
Fistulectomy	32	64	0	32	0
Seton placement	0	30	0	0	0

DISCUSSION

Fistula in ano management was described by Hippocrates as early as 450 BC. 90% origin is from crypto glandular infection. In the remaining 10% of the cases a specific cause, may be found. These are tubercular infection, inflammatory bowel disorders, diverticulosis or infected fissure in ano. Fistula was seen mostly in middle aged men with age of 20-30 years with a male: female ratio of 5:1 in present study. Similar findings were observed in different study done by Jethva, et al. Male predominant involvement but different age group (30-40 years) was found in another study done by de Oliveira, et al.[8,9]

In this study, 66% of patients had low level of fistula-in-ano and another, 34% of patients had a high level of fistula-in-ano. A study done by Jethva et al, also observed that higher number of patients had fistula-in-ano of low level. Depending upon types of fistula the surgical procedure is planned. Fistulotomy and Fistulectomy are procedure of choice for low anal fistula.[8]

If we consider the average duration of hospital stay in hospital, patients with Seton placement procedure require longer post-operative hospital stay (14.2 days) as compared to other two surgical procedures in the present study. Similar findings were observed in another study done by Jethva et al.[8]

In the present study, incidences of pain, bleeding and incontinence were more in Fistulectomy as compared to fistulotomy. But recurrences were found in 4 (8%) in fistulotomy while not a single case of recurrence was reported in other two surgical modalities. Fistulotomy is desirable methods due to less chances of incontinence and pain but there are chances of recurrence.[10,11]

CONCLUSION

In conclusion, fistulotomy has a higher recurrence rate than fistulectomy. But fistulotomy may be preferred for low anal fistulas as it is associated with less chances of incontinence and has significantly less incidence of post-operative complications and is associated with less hospital stay duration. Seton happens to be the procedure of choice in high anal fistula. However, due to small sample size, the findings of the present study need to be substantiated further with studies involving larger sample sizes.

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Ethical approval: The study was approved by the institutional ethics committee

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