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Fistula in Ano: A Prospective Study

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ABSTRACT

INTRODUCTION: Perianal fistula is a very unpleasant condition. It is also quite difficult to be solved without recurrence or with complete preservation of sphincter function. This paper summarizes the etiology, classification of fistulas along with the long-term surgical experiences in the approach and the treatment of this condition.

METHODS AND MATERIALS: This prospective study was conducted in Department of General Surgery of tertiary care centre in 50 patients who came to out patient department with fistula in ano and were operated for same. All selected cases were studied from admission up to the complete healing of wounds. Final outcome of complications of surgery, if any, were also noted.

RESULTS: Most fistula-in-ano were seen in 31 to 40 years (42%) age group. So in our study series, with most commonly seen in male (76%), having perianal discharge as most common presentation (92%). (74%) Patients had history of perianal abscess in which (32%) patients had history of spontaneously burst out abscess and (42%) patients had undergone perianal surgery. (94%) Cases had low type of fistula-in-ano and (54%) had inter sphincteric fistula.

CONCLUSION: Commonly performed surgeries in fistula in ano are fistulotomy, fistulectomy, LIFT procedure according to type of fistula. Fistulectomy have better outcome compared to other techniques and fast healing. It is curable disease by treating it surgically with higher antibiotic support and wound management in postoperative period.

KEYWORDS: Fistula in ano, perianal abscess, fistulectomy

I. INTRODUCTION

A fistula-in-ano means abnormal communication between perianal region and anal canal, it is chronic and is usually lined with some degree of granulation tissue. It has one opening in anorectal lumen **(the internal opening)** and another opening **(the external opening**) over skin of perineum or buttocks.

The most common cause is previous anorectal abscess which was not treated properly. Recurrent anorectal abscess which ruptured spontaneously or was surgically drained can lead to fistula-in-ano formation. The occurrence of such abscess is due to infection of anal glands - crypto glandular hypothesis of Eisenhammer.

The standard classification that is frequently used divides fistula-in ano into two broad categories:

- **Low anal fistula :** where the internal opening opens inferior to the anorectal ring
- **High type :** where the internal opening opens into the anal canal above the anorectal ring.

According to Parks, fistula-in-ano is divided into 4 types:

- **Inter-sphincteric (70%) :** through the internal sphincter;
- **Trans-sphincteric (25%) :** through the external and internal sphincter;
- **Supra-sphincteric (5%) :** supralevator in location and opens into ischiorectal fossa;
- **Extra-sphincteric (1%) :** tract passes through the entire sphincter mechanism and opens on to the skin.

Fistula commonly presents with perianal discharge, pain, swelling, skin excoriation, bleeding per rectum, systemic manifestation etc.

Despite of easy diagnosis, establishing cure is problematic in these cases because of location of disease, daily habits and personal hygiene. Main objective of surgery is to heal fistula-in-ano and minimise disease morbidity.

Many surgical techniques including fistulotomy, fistulectomy, Seton technique, LIFT procedure, VAAFT, FiLaC, endorectal advancement flap are available.

Factors affecting recurrence of fistula are:

- Complex fistula,
- Horseshoe extension,
- Lack of localization,
- Lateral position of the internal opening,
- Previous surgery and
- Surgeon's expertise

Fistula in ano is a common disease affecting the perianal region and although being a common disease there are few studies available in

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this part relating to its aetiology, pathogenesis, mode of presentation and its prevalence and incidence. Hence the study was planned to assess the various etiologies, various modes of presentations and its outcome.

II. METHODS AND MATERIALS

The study of 50 cases was conducted in Department of General Surgery of tertiary care centre over a period of 3 years.

Inclusion criteria:

All consecutive patients (males and females) above 18 years of age, who present with fistula-in-ano.

Exclusion criteria:

Recurrent Fistula at presentation.
Not willing to participate in the study.
Pregnant females.

Procedure:

Detailed clinical history of patients including co-morbidities and past history were taken. All the patients were examined thoroughly and after determining type and complexity of fistula clinically and radiologically, further investigations were offered to aid in diagnosis and to plan further management. All routine investigations were done. Type of surgery performed and post-operative complications were noted and treated accordingly. Various surgical procedures performed were:

- Fistulotomy
- Fistulectomy
- Seton placement
- LIFT procedure
- Combination of above procedures

Patients were discharged and duration of hospital stay was recorded. Duration of hospital stay was considered from day of operation to day of discharge. After discharge all patients came for dressing and follow up in OPD twice weekly till the end of 1.5 month and condition of wound and any complication were noted. Then patients were asked to come for follow up once every 2 weeks till the end of 3rd month and then once a month till the end of 6 months.

III. OBSERVATION AND RESULTS

In our study, total 50 patients were taken and all of them under go surgical procedure for fistula-in-ano. The results obtained from it are as following:

Table 1. Age distribution

Age (in years)	No. of patients	Percentage
18-30	14	28%
31-40	21	42%
41-50	07	14%
51-60	05	10%
>60	03	06%

In our study 66% patients belongs to 31 – 60 year age group. Similar study by Yadu S et al in which 68% patients belongs to 31 – 60 year age group. Another study done by Kumar V et al in which 62% patients belongs to 31 – 60 year age group.

Table 2. Sex distribution

Sex	No. of patients	Percentage
Male	38	76%
Female	12	24%

So in our study series, fistula-in-ano were most commonly seen in males than in females with ratio of approximately 4:1.

Table 3. Modes of presentation

Presentation	No. of patients	Percentage
Perianal pain	38	76%
Perianal discharge	46	92%
Pruritis ani	07	14%
Perianal swelling	12	24%
Fever	07	14%

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Abdominal pain	03	06%
Altered bowel habits	08	16%

In our study, most common presenting complaint was perianal discharge in 92% of cases, other similar study of Yadu S et al also have perianal discharge as most common mode of presentation in 74% of cases.

Table 4. Past history

Past and family History of tuberculosis also consider in this study to rule out its connection with fistula-in-ano as it causes delayed healing and increase risk of recurrence.

Past history	No. of patients	Percentage
Perianal abscess	37	74%
Spontaneously burst abscess	16	32%
Perianal surgery	21	42%
Tuberculosis	02	04%

In our study, 74% patients had history of perianal abscess. In other study by Sukhlecha AG past history of perianal abscess was obtained from 80% of cases while in study of Yadu S et al history of perianal abscess is relatively low as 40% of cases.

Table 5. Type of fistula according to level of internal opening

Level of fistula	No. of patients	Percentage
Low	47	94%
High	03	06%

So in our study, 94% cases has low type of fistula-in-ano. In other study, Yadu S et al 88% cases has low type of fistula-in-ano and 12% cases has high type of fistula-in-ano. In study by Kumar V et al 74% cases has low type of fistula-in-ano and 4% cases has high type of fistula-in-ano.

Table 6. Type of fistula according to Park's classification

Type of fistula	No. of patients	Percentage
Intersphincteric	27	54%
Trans-sphincteric	22	44%
Suprasphincteric	01	02%
Extra sphincteric	00	00%

In our study, 54% of cases diagnosed to had inter sphincteric fistula and 44% had trans sphincteric while in other study, by Sileri P et al 23% were inter sphincteric fistulas, 60% were trans sphincteric fistulas.

Table 7. Type of surgical procedure performed

Type of surgery	No. of patients	Percentage
Fistulotomy	10	20%
Fistulectomy	27	54%
Fistulectomy + seton placement	01	02%
Seton placement	02	04%
LIFT procedure	04	08%
Fistulectomy with dosral sphincterotomy	06	12%

So in our study we performed surgical procedure as mentioned in above table. So low and simple fistula-in-ano can be treated by fistulotomy, fistulectomy, LIFT procedure whereas high or complex type of fistula-in-ano can be treated with combination of procedures like fistulectomy + seton insertion (two stage fistulectomy).

In other study by Yadu S et al, most commonly performed surgery was fistulectomy (78%).

IV. CONCLUSION

A fistula in ano is an important disease of perianal region and it occurs mainly due to crypto glandular infection of anal gland and has complication of anorectal abscess. It can be diagnosed easily with history and clinical examination but it required further investigation like ultrasound and MRI for exact anatomy of tract and its relation to sphincter complex, which is important to decide appropriate surgery. A low variety of fistula has better post-operative out come and rapid healing compared to high variety of fistula which may require more than one surgical procedure for definitive cure. Commonly performed surgeries in fistula in ano are fistulotomy, fistulectomy, LIFT procedure according to type of fistula. Fistulectomy has better outcome compared to other techniques and has fast healing. In our study no any specific aetiological condition was found associated with fistula in ano, all 50 cases had non-specific acute on chronic inflammation. It is a curable disease by treating it surgically alongwith higher antibiotics supports, with local application of antibiotics and wound management in postoperative period. Recurrence can be decreased by proper pre-operative work up with selection of proper operative technique and management of associated conditions, followed by proper post-operative care.

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