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Clinical study and management of fistula in Ano

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Abstract
Background: Fistula in Ano is one disease which is easy to diagnose but difficult to cure as patients report in very late phase of the disease and it leads to problems. Aim of this study was to determine the etiology, clinical presentation, efficacy of different surgical approach, early and late post-operative complications, and recurrence rate in cases of fistula in Ano.
Methods: Prospective Observational Study was conducted in Department of General Surgery, Government Medical College, Solapur from Sep 2016 to Aug 2018 with Sample size of 50 cases.
Results: Most common age group affected between 18-29 years, with male preponderance. Most common etiological factor is perianal sepsis following Crypto glandular infection, with pain as most prevalent symptom. Simple fistula is more common, and in complex fistula most prevalent type is high transsphincteric fistula. Most common procedure done is fistulotomy. Most common complication is recurrence. Most number of complications was seen in fistulotomy. Maximum recurrence is seen after fistulotomy.
Conclusion: Most common cause is crypto glandular infection, most common feature is pain, Fistulectomy is more efficacious, and complications are maximum with fistulotomy, highest recurrence seen after fistulotomy.

Keywords: Fistula, pain, setn, fistulotomy, Fistulectomy, set on, recurrence

Introduction

Anal Fistula-in-Ano is a chronic abnormal communication between the epithelized surface of anal canal or rectum and usually the perianal skin [1]. There are many causes of anorectal suppuration, the most common being the infection of Crypto glandular structures [2]. If the right kind of surgery is not performed, the disease tends to recur. It can also recur due to negligence in post-operative care [3]. The prevalence of nonspecific anal fistulae has been estimated to be 8.6 to 10/100,000 of the population per year, with a male to female ratio of 1.8:1 [4]. Park classified fistula in Ano into four different types depending on its relation to the anal sphincters – Intersphincteric – 70%, Transsphincteric - 25%, Suprasphinteric - 5%, Extrasphincteric - 1% [5]. Goodsall‟s rule predicts that if a transverse anal line is drawn transversely through the anus, an external opening anterior to this transverse anal line will have a radial tract to open in the dentate line, whereas an external opening posterior to the transverse anal line will have a curved fistulous tract to open in the posterior midline. The exception to this rule is an anterior fistula with its external opening lying 3 cm or more from the anal verge will have a curved path like a posterior fistula to have its internal opening in the posterior midline [6]. A fistulotomy is the surgical opening of a fistulous tract [7]. Fistulotomy is the procedure of choice for simple intersphicnteric fistulous tract and also for low lying transsphincteric fistulae [8].
Seton fistulotomy is the procedure of choice for high anal fistulas involving significant amount of external anal sphincter [9, 10].
Fistulectomy is a procedure of excising the fistulous tract from external opening up to the internal opening [11].
Fistulectomy removes secondary fistulous tracts compared to fistulotomy, but fistulotomy has shorter healing times and less chance of damage to the sphincters [12]. Many new techniques such as the mucosal advancement flap, the Gore Bio-A fistula plug, and the ligation of intersphincteric fistulous tract procedure have seen recent acceptance [13].

Aims & Objective

1. To study the etiology of fistula in Ano.
2. To study the clinical presentation of patients having fistula in Ano.
3. To study the efficacy of different surgical approach i.e. fistulotomy,
4. Fistulectomy, and set on treatment in management of fistula in Ano.
5. To study early and late post-operative complications in these patients.
6. To study the recurrence rate in these patients.

Materials and Methods

Type of study: Prospective Observational Study.

Place of study: Department of General Surgery, Government Medical College, Solapur.
Period of study: Duration from Sep 2016 to Aug 2018.
Sample size: 50 cases.

After admission detailed history was taken to establish proper diagnosis. Thorough physical examination was done in each case. Baseline investigations, as routinely required were done followed by imaging studies. After proper evaluation and preparation, patients who required surgical management were taken up for surgery. Meticulous techniques were practiced.

Results

Table 1: Distribution of patients according to age in years

Sr. No	Age group in years	Number of cases (%)	Mean age of patients
1	18 - 29	19 (38%)	22.84
2	30 - 39	17 (34%)	34.76
3	40 - 49	06 (12%)	44.50
4	50 - 59	05 (10%)	55.80
5	> 60	03(06%)	69.00

Maximum 38% patients are from age group 18-29 years and minimum 06% patients are from age group > 60 years.

Table 2: Distribution of Patients according to gender

Sr. No	Sex/Gender	Number of cases (%)
1	Male	37 (74%)
2	Female	13 (26%)
	Total	50 (100%)

The distribution of patients according to gender show 74% patients are male and 26% patients are female.

Table 3: Etiology/predisposing factors of fistula in Ano

Sr. No	Etiology/Predisposing factors	Number of cases (%)
1	Perianal Sepsis/Crypto glandular infection	31 (62%)
2	Tuberculosis	03 (06%)
3	Malignancy	00 (00%)
4	Fissure in ano	04 (08%)
5	Crohn's Disease	00 (00%)
6	No previous significant history	10 (20%)
7	Trauma in perianal region	02 (04%)
	Total	50 (100%)

In present study most common etiological factor is perianal sepsis following Crypto glandular infection 62% while no previous significant history is found in 20% cases.

Table 4: Clinical presentation of patients

Sr. No.	Symptoms	Number of patients	Percentage
1	Pain	16	32%
2	Discharge	15	30%
3	Swelling	09	18%
4	Itching	04	08%
5	Constipation	03	06%
6	Bleeding	01	02%
7	Fever	02	04%

Most prevalent symptom is pain in 32%. Bleeding is the rarest symptoms present in only 02% patient.

Table 5: Classification of Fistula

Sr. No.	Type of fistula	Number of patients	Percentage
1	Simple fistula	38	76%
2	Complex fistula	12	24%

It is found that simple fistula is more common 76% cases than complex fistula 24% cases.

Table 6: Type of complex Fistula

Sr. No.	Type of complex fistula	Number of patients	Percentage
1	High transsphincteric	07	58.33%
2	Suprasphinteric	00	00%
3	Extrasphincteric	00	00%
4	Multiple openings	03	25%
5	Recurrent	02	16.67%

Among complex fistula most common is high transsphincteric fistula 58.33% cases

Table 7: Distribution of patients according to operative procedures

Sr. No.	Operative Procedure	Number of cases	Percentage
1	Fistulectomy	17	34%
2	Fistulotomy	28	56%
3	Seton	05	10%
	Total	50	100%

In present study most common procedure done is fistulotomy 56% patients. Seton is done in only in 10% patients.

Table 8: Postoperative complications

Sr. No.	Complications	Number of cases	Percentage
1	Persisting Sepsis	02	04%
2	Incontinence	01	02%
3	Recurrence	13	26%
	Total	16	32%

It is found that complications are seen in 16 (32%) cases out of 50 fistula in Ano surgeries, out of which most common complication is recurrence 26% cases.

Table 9: Analysis of complications with respect to procedure

Sr. No.	Complications	Fistulectomy	Fistulotomy	Seton	Total
1	Persisting Sepsis	00	01	01	02
2	Incontinence	00	01	00	01
3	Recurrence	03	10	00	13
	Total	03	12	01	16

The Chi-square statistic with Yates correction is 1.5415.
The p –value is 0.21439. Not significant at $p < 0.05$

Most number of complications are present in fistulotomy 12 out of 28 i.e. (42.85%) cases, and much less in case of Fistulectomy only 3 out of 17 i.e. (17.64%). The difference was found to be statistically not significant as p- value is greater than 0.05.

Table 10: Recurrence rate in various surgical procedures for Fistula in Ano

Sr. No.	Surgical Procedures	Number of cases	Recurrence
1	Fistulectomy	17	03 (17.64)
2	Fistulotomy	28	10 (35.71%)
3	Seton	05	00 (00%)

The Chi-square statistic with Yates correction is 0.1758.
The p – value is 0.674971. Not significant at $p < 0.05$

Maximum recurrence is seen after fistulotomy 35.71% cases, with no recurrence after Seton procedure.
The difference was found to be statistically not significant as p value is greater than 0.05.

Discussion

Maximum i.e. 38% patients are from age group 18-29 years, in contrast Vyas A. K *et al.* [14] observed most common age group was 22 to 55 years. In present study, male patient is 74%, i.e. >50%, similar result were observed studies by Tated S.P *et al.* [3] 82.71%, Alexander N *et al.* [13] 82.5%, Jebakumar A et al [4] 80%. Most common etiological factor is perianal sepsis following Crypto glandular infection 62%, similar result was observed by Alexander N *et al.* [13]. In present study most prevalent symptom is pain 32%, in contrast Tated S.P *et al.* [3] 97.53% presented with swelling in perineal region, Sushma R *et al.* [15] 96% presented with perianal discharge. We found that simple fistula (76%) is more common, similar result observed by Alexander N et al [13] 85%.
In case of complex fistula, most numbers are of high transsphincteric i.e. 58.33%, similar result observed by Alexander N *et al.* [13].
In present study most common procedure done is fistulotomy 56%, in contrast Tated S.P *et al.* [3] 74.07% patients were treated by Fistulectomy, Jebakumar A *et al.* [4] Fistulectomy surgery had done in 68%.
It is found that complications are seen in 32% cases of fistula in Ano surgery, out of which most common complication is recurrence 26%. Most number of complications are present in fistulotomy 42.85% cases, in contrast to present study Ramachandra M. L *et al.* [16] recurrence seen in 25% cases of Fistulectomy and 10% in fistulotomy. Kharadi A *et al.* [17] fistulotomy has higher incidence of recurrence than Fistulectomy as more tissue is left behind. RCT by Kronberg, the recurrence rate following fistulotomy and Fistulectomy were reported to be 12.5% and 09.5% respectively [18]. In this study, it is found that maximum recurrence seen after fistulotomy 35.71%) cases, in contrast to present study, Vyas AK et al [14], showed that there was 3.2% in Fistulotomy

History

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”. Ayurvedically medicated set on, “kshara” used by Sushruta for treating fistula in Ano.

Conclusion

Commonest etiological factor associated with Fistula in Ano is chronic nonspecific inflammation most commonly due to Crypto glandular infection, with pain as most common presentation. Fistulectomy is more efficacious than Seton and Fistulotomy, in our study. Post-operative complications are maximum with fistulotomy. Highest recurrence rate is observed following Fistulotomy and no recurrence seen with Seton.

Conflict of Interest

Not available

Financial Support

Not available

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