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Original Research Paper

General Surgery

A CLINICO-PATHOLOGICAL STUDY OF FISTULA-IN-ANO

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ABSTRACT Fistula-in-ano is considered as one of the commonest cause for a persistent seropurulent discharge, irritating the perianal skin andcausing discomfort. This study deals with theetiopathogenesis of patients presenting with fistula in ano at Rajah muthiah medical college and hospital, Chidambaram. The different modes of treatment and their efficacy will be compared further. Fifty patients were selected who were diagnosed as fistula in ano admitted in inpatient basis during Oct2019 to Sept2021. Patient received tailored treatment. Data related to the objectives of the study were collected. Majority of patients belonged to the age group of 30-50 years which accounts for 68% of patients. Male being predominantly affected (80%). 80% simple fistula out of which 64% male and 16% female. Complex fistula constitute about 20% male 16% and female 4%. Intersphincteric 46.6%; transphincteric33.3% ; horse shoe 4%; anterior fistula 2.6%.Fistulectomy is commonly performed i.e., in about 50% of cases with a mean durationof stay for 3 - 5days. The postoperative complication of recurrence was seen in 5 case (7%). after 90 days.We conclude that the most common type of fistula is intersphincteric. Fistulectomy is the most commonly performed procedure. Recurrence was seen in cases associated with comorbidity. The newer modalities of treatment to prevent recurrence and avoid sphincter damage are yet to be implemented.

KEYWORDS : Fistula-in-ano, Fistulotomy, Fistulectomy.

INTRODUCTION

Fistula-in-ano is an abnormal communication lined by granulation tissue that runs from anorectal lumen to the exterior perianal skin causing a chronic inflammatory response. The most common cause is nearly always by a previous anal gland intersphincteric infection. (Cryptoglandular hypothesis of Eisenhammer).

Tuberculosis, LGV Crohn's or ulcerating proctocolitis can also lead to development of anal fistula. Fistulae have also been reported following external injury or probing an abscess or low anal fistula [iartogenic]. A colloid carcinoma of the rectum can manifest itself through an anal fistula. Occasionally ingested of fish or chicken bones may penetrate the rectum. Impalement injury after falling astride a sharp object or as a result of a road traffic accident may result in a high anorectal fistula.

According to Park's classification the anal fistula can be classified into four types –

- Intersphincteric – 70%
- Transphincteric - 25%
- Suprasphinteric - 5%
- Extrasphincteric - 1%

The chief complaint is seropurulent discharge. There is usually a history of pain that subsides temporarily on discharge.

In Crohn's disease or tuberculosis, the margins may be violaceous and the discharge watery.

History and examination findings remain the main stay of diagnosis. The examiner should examine the entire obstetric, anal surgical, gastrointestinal and sphincter function under anesthesia. Site of internal and external opening in theperineum. This is to be followed by a proctosigmoidoscopy. External opening appears as an open sinus.Internal opening is felt as induration or enlarged papilla.

A plausible application of the Goodsall's rule is done. Opening anterior to the anal verge have a straight tract and posterior have a curvilinear pattern. Exception includes when the opening is anterior , but 3cm away from anal verge then tract is that of the latter ie, curvilinear or horse shoe.

Commonly done investigations in fistula-inano are Sigmoidoscopy ,colonoscopy, retrograde fistulography, Endo anal/ endorectal ultrasound, Magnetic Resonance Imaging (MRI), Computerized Tomography Scan (CT scan), A barium enema / small bowel series, Fistuloscopy.

The main aimattreating an anal fistula is to be disease free while preserving the continence. The basic surgical techniques for the treatment of anorectal fistulae are fistulectomy, fistulotomy, use of a seton, endorectal advancement flaps.

The scarcity of studies etiopathogenesis, comparison of various treatment modalities, especially in a government setting has yielded to this prospective study.

METHODOLOGY

This is a prospective study was conducted at the Department of Surgery, Rajah Muthiah Medical College and Hospital, Chidambaram during Sept 2019 to Oct 2021.

A number of 50 in patients were selected who were diagnosed as fistula in ano admitted in Rajah Muthiah medical college and Hospital, Chidambaram during study period. Patient underwent selective treatment. Data related to the objectives of the study were collected.

Inclusion Criteria

The patients who are clinically diagnosed as fistula- in- ano both sexes, having both high and low fistulas who were subjected to relevant investigation and undergo surgery were included.

Exclusion Criteria

- Complex fistulas as in Crohns/ HIV/ previous radiation exposure
- Superficial fistulas

- Diverticulitis
- Cases unfit and refused for surgery

Once diagnosed the selected patients were subjected to routine and specific investigations. Data related to preoperative and intraoperative interventions along with postoperative outcome was collected. Patients were treated with either fistulectomy, fistulotomy, LIFT orseton placement according to type of fistula.

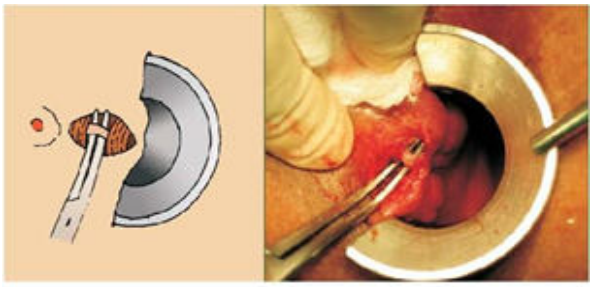

Fig. 1: LIFT procedure

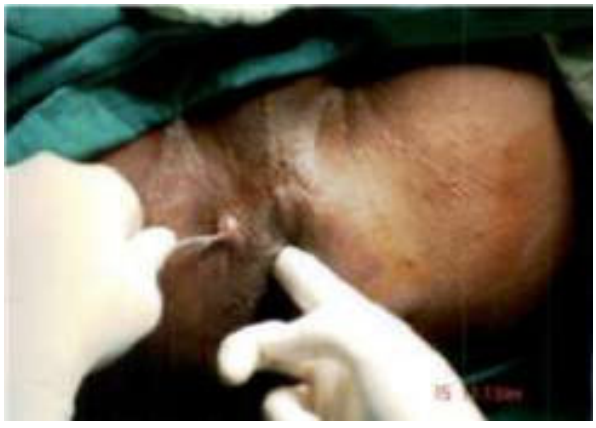

Fig. 2: Probe through the external opening

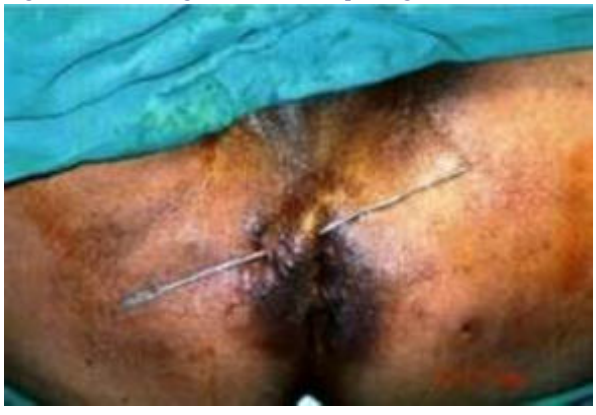

Fig. 3: Probe through the external and internal opening of the fistula

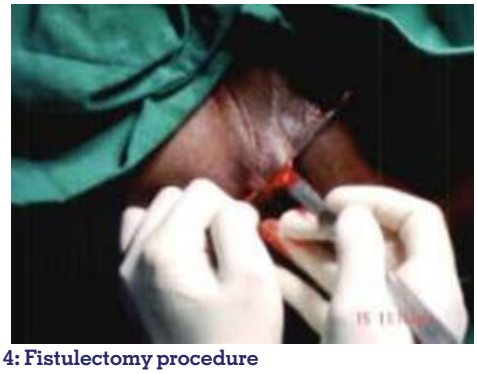

Fig. 4: Fistulectomy procedure

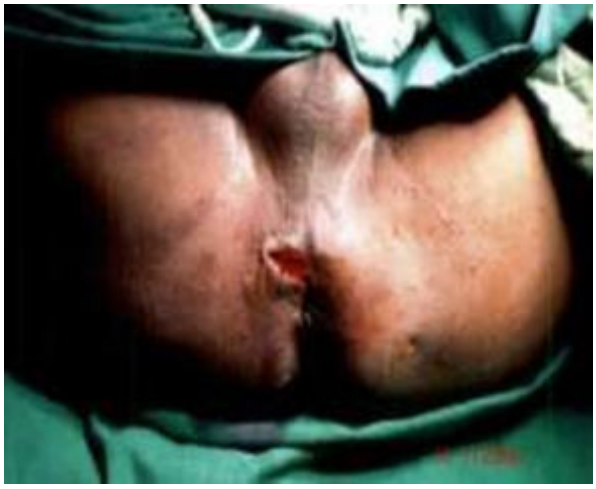

Fig 5: Fistulectomy wound

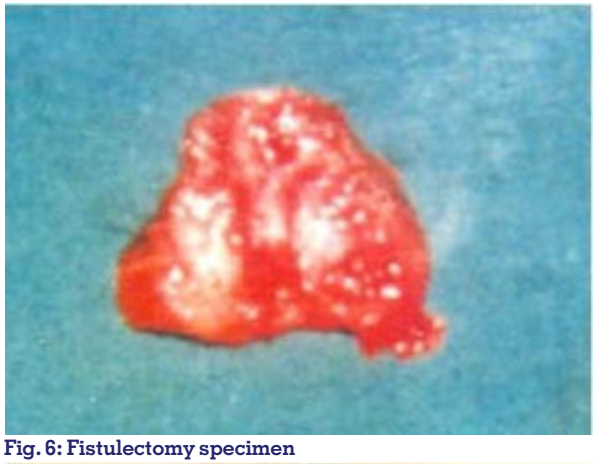

Fig. 6: Fistulectomy specimen

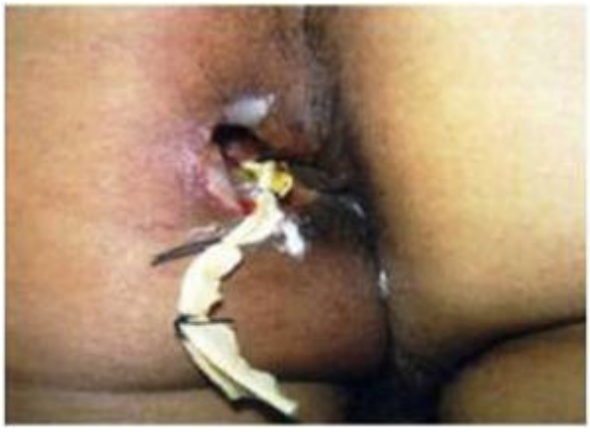

Fig.7: Seton Placement& retightened at weekly intervals

RESULTS

In our study of 50 patients, maximum number of patients were in the age group 30 – 50 years i.e., (68%) There were5 patient (13.3%) in the age group of ≤ 29 years, and 10 patients (18.7%) in the age above 50 years. **Table 1**

In our study of 50 patients there were 35 (80%) male patients, 15 (20%) female patients indicating that the disease is more common in male with a ratio of male to female is 4:1. **Table 2**

In the present study the commonest symptoms is pain in 76% patients and discharge in 73.3% patients. The least common symptom being bleeding at 2.6%. **Table 3**

Out of 50 cases 80% cases have simple fistula. 64% seen in

male and 16% in female. Complex fistula constitute about 20% , male 16% and female 4%.

46.6 % hadintersphincteric ; 33.3%transphincteric: 5.3% fistula with multiple opening; 4% had horse shoe and 2.6% had anterior fistulas. **Table 4**

33% had associated co morbid conditions. 53.3% have had a past history of surgery for perianal abscess. **Table 5**

Surgically fit 50 cases which were fulfilling the inclusion criteria were treated as depicted in **Table 6.**

Most of the cases healed within 4-6days but some cases took more than 6days to heal **Table 7.**

38 patients revealed non specific inflammation on biopsy. While 12 patients revealed TB. **Table 8.**

Follow up

52% of patients developed recurrence in 0-6months 25.3%. Least recurrence seen in 2- 3yr period about 5.3%.**Table 9.**

Table 1: Age Distribution

Age in years	No. of patients	Percentage
16 - 29	5	13.3
30 – 50	35	68
Above 50	10	18.7

Table 2: Sex Incidence

Sex	No. of patients	Percentage
Male	35	80
Female	15	20

Table 3: Symptoms

Symptoms	No. of patients	Percentage
Pain	38	76
Discharge	37	73.3
Swelling	22	45.3
Pruritus	8	17.3
Constipation	6	13.3
Fever	4	9.3
Bleeding per rectus	1	2.6

Table 4: Standard classification

Type	No. of patients	Percentage
Intersphincteric	23	46.6
Transphincteric	37	33.3
Anterior	16	2
Complex	3	5
Horseshoe	2	4

Table 5 : Associated conditions

Type	No. of patients	Percentage
Diabetes	5	36
Hypertension	5	36
Cardiac diseases	2	16
Others	1	12
Anorectal abscess (burst opened or Surgically drained)	26	53

Table 6: Treatment

Type of operation	No. of patients	Percentage
Fistulectomy	28	50.7
Fistulotomy	15	33.3
LIFT	5	12.4
Seton	2	2.7

Table 7: Time taken to heal

Time	No. of patients	Percentage
3 Days	7	14.6
4 to 6days	26	52
7days and above	17	33.3
Total	50	100

Table 8: Histopathological report

Histopathology report	No. of patients
Non specific inflammation	38
Tuberculosis	12

Table 9: Interval between previous surgery and fistula formation

Duration	No. of patients	Percentage
0-6 months	13	25.3
7 - 1year	6	12
More than 1year but less than 2 years	3	5.3
More than 2 years	5	9.3

DISCUSSION

About 50 cases of fistula in ano have been operated at Rajah Muthiah medical college and Hospital, Chidambaram.

In a reported series of Kim JW *et al*. the male: female ratiois 4.6:1. Also most patients are in the third or fourth decade of life and uncommon after the age of 60 years.

In our study also there is a male predominance with a ratio of 4:1 ratio. Most of the patients in our study present between the 30 - 50 years accounting to 68% of cases.

80% were simple out of which 64% were operated in male and 16% in female. 20% were complex, male operated accounted to 16% and female 4%.

Vasilevsky and Gordonrecorded a history of discharge, anal pain, a recurrent perianal swelling, bleeding, and pruritus. Associated fissure in ano and hemorrhoids was recorded in their patients.

In our study, a history of discharge was in 73%, anal pain in 76% a recurrent perianal swelling in 45%, bleeding in 2.6% and pruritus in 17% of patients. Our findings were, almost nearer to their study.

Parks and Stitz [16] demonstrated that hospital stay and healing times was much longer in patients treated for transphincteric and supraphincteric as compared with those treated for an intersphincteric fistula.

In our study also the level of fistula and type of treatment was cross tabulated. As a result an output of Chi square test value of 3.379 was obtained. P value being .0852 which is higher than the 0.05 (5% level of significance) hence null hypothesis H° that states that there is no significant difference in the level of fistula and type od treatment was rejected. Instead alternative hypothesis H1 that states that there is difference has been accepted.

All patients were followed up periodically. 7% had recurrence and the maximum no of cases were detected in 0-6months window period post operatively. Recurrent cases were associated with comorbidities indicating a more successful outcome in otherwise healthy individuals.

CONCLUSION

Our study based on 50 sample size of patients who were diagnosed to have fistula- in- ano, who underwent surgical intervention. We conclude that 53.3% individuals have had a past surgical history of anorectal abscess drainage indicating unresolved anorectal sepsis to be the main causative factor for fistula in- ano. Male predisposition being higher. Pain and discharge as thecommonest symptom. Fistulectomybeing the

most commonest procedure practiced in our study setting. Frequently encountered post operative complications being recurrence with maximum percentage seen in the initial 6months. Lesser risk of recurrence and better outcome in an otherwise healthy individual free of comorbidity.

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