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Evaluation of Different Surgical Procedures in Fistula in Ano

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I. INTRODUCTION

Fistula in ano is a notorious ailment for patient and the surgeon alike, incidence varying between 0.02% - 0.03% and 17-20% in European countries and India[1, 2]. It is an abnormal communication between the anal canal / rectum and perianal skin, lined by granulation tissue. It is the outcome from infection, trauma, chronic granulomatous infestations (tuberculosis, actinomycosis) and post irradiation. In 90% cryptoglandular infection lead to anal abscess which may turn into fistula[3]. Parks et al classified fistulae on the basis of location as: intersphincteric , transphincteric, suprasphincteric , or extrasphincteric[4]. It is either low or high while Low fistula are mostly single tract involving a small portion of external sphincter whereas >30% to 50% involvement of sphincter is termed as complex fistula. In females mostly it is anterior in location while multiple tracks are prone to recurrence. Anal incontinence is observed in complex and post irradiation fistulae [5,6,7]. Perianal discharge, pain, swelling, bleeding, diarrhoea, skin excoriation, fever remain common clinical features [8]. To achieve rapid healing preservation of anal sphincter is of utmost important. Treatment of anal fistulae remains herculean task owing to their anatomical location, recurrence, sepsis and complications and postoperative faecal incontinence. Thense to minimize morbidity multiple surgical techniques like fistulectomy, fistulotomy, seton technique, endorectal advancement flap, Ligation of intersphincteric fistula tract (LIFT), Video-assisted anal fistula treatment (VAAFT), fibrin glue and fibrin plug are tried but owing to resultant notorious sepsis and incontinence gold standard surgical technique still remains in abeyance.

II. MATERIAL AND METHODS

Our study in SPS hospitals Ludhiana included 120 patients of perianal fistulae between January 2012 to December 2017. Various modalities of treatment were done and assesed their efficacy in reference to recurrence and incontinence. All patients between 15 to 80 years with persistent perianal discharge for more than 1 month were included whereas patients of anorectal malignancy, perianal abscess, fissure in ano, congenital and gynaecological fistulae were excluded.

III. RESULTS

In our study of 120 patients optimal number (53%) was in third to fifth whereas 21% and 9% were in sixth and above decades respectively. Male predominance (88%) was observed over females. Predominant clinical features like perianal discharge, pain, swelling and bleeding per rectum were 93.3%, 28.3%, 10% and 3.3% respectively (Table 1) whereas 18%,11%,2% and 1.5% patients had Diabetes mellitus, hypertension, bronchial asthma and hypothyroidism. Almost all cases had single external opening (Table 2).

Goodsall's rule was accurate in 74.62% and 58.82% in posterior and anterior openings in our study (Table 3).

MRI Perineum in our all cases showed transsphincteric, intersphincteric, suprasphincteric, submucosal, extrasphincteric
fistula in 49.2%, 40.8%, 2.5%, 5% and 2.5%.

Table 1: Demographic and clinical characteristics of study participants

Charecterstics	**No. of patients**	**Percentage**
Male	106	88.3%
Female	14	11.7%
Age in years		
< 20	2	1.7%

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21-30	17	14.2%
31-40	36	30%
41-50	28	23.3%
51-60	26	21.7%
>60	11	9.2%
Clinical features		
Perianal Discharge	112	93.3%
Pain	34	28.3%
Swelling	12	10%
Bleeding Per Rectum	4	3.3%
Itching	0	Nil
Fever	0	Nil

Table 2: Clinical Examination

Examination		**Numbers**	**Percentage**
Number of Openings	External	118	98.3%
	Internal	86	71.7%
Position of External opening	Posterior	67	55.8%
	Anterior	51	42.5%

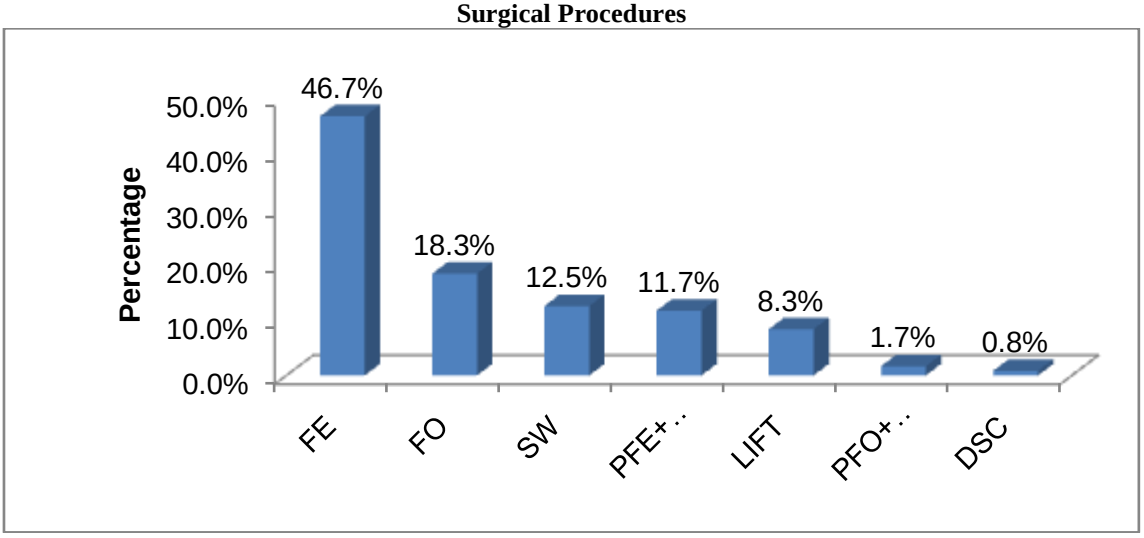
Table 3: Intraoperative Findings

Intraoperative findings of fistula in ano	**Anterior external openings**	**Posterior external openings**	**Total**
Direct tract	30	17	47
Indirect tract	21	50	71
Total	51	67	118

In our study, Low (61%) were commoner than high (39%) whereas transsphincteric remained common followed by intersphincteric fistula.

Different surgical procedures like fistulectomy (FE), fistulotomy(FO), seton wiring(SW), partial fistulectomy and seton wiring(PFE+SW), ligation of intersphincteric tract (LIFT), partial fistulotomy and seton wiring(PFO+SW) and diversion sigmoid colostomy were performed as shown in the graph. 20 patients were lost to follow up. 5 had temporary incontinence whereas 6 patients had recurrence (2, 3 and 1 in FE, FO and SW).

Surgical Procedures



IV. DISCUSSION

In our study, fistula in ano was common in middle age group which is comparable to other studies available in the literature [20, 24, 25]. Similarly male were predominantly involved by the disease in our data which is again similar to other studies [1,19,20,24.]

Incidence of co morbid conditions like DM, HTN in our study was 18 and 11% which remains comparable to study by Qureshi IP et al [20]. However Ramanujan et al [21] observed HTN more common.

Goodsall's rule was accurate in approximately 75% in posterior and 59% of anterior openings in our study, in

comparision to observations by Cirocco and Reilly [23] in 90% and 49% in posterior and anterior openings.

Transsphincteric was most common which is in agreement with most of the studies on fistula in ano like Vasilevsky and Gordon[12], Pierpaolo S et al[17], Malouf AJ et al[18]. However, in contrary Parks et al[5], Saadeldin Ahmed Idris et al[16], Marks and Ritchie[24] observed transsphincteric fistulae at a second place in their studies. Perianal discharge (93.3%) and pain (28.3%) were the most common presenting complaints which simulate observations by Elsebai OI et al[11], Vasilevsky, Gordon[12] and Qureshi IP et al[20] whereas observations by Ramanujan PS et al[21] were contrary to above cited studies where

in they reported pain and perianal swelling in almost all the cases. Post operative complications like incontinence and recurrence after FE and FO in our study were comparable to other

studies [13,15]. Similar results regarding recurrence (7%) and incontinence (nil) after SW in our study were observed in other studies like Akhtar A[10], Memon AA et al[22]. Among 12 patients in our study who underwent PFE +SW no one had recurrence and incontinence which was contrary to study results of Poon CM et al[14]. Success rate of LIFT in our study was 100% which were comparable to other studies [9, 26.]

V. CONCLUSIONS

Though our study does not show any significant statistical difference between the various surgical procedures for all fistulas in ano in terms of recurrence ($p>0.05$) and anal incontinence ($p>0.05$), the results of seton wiring alone and seton wiring in combination with fistulectomy, LIFT are encouraging. These procedures have least recurrence rate and very low postoperative incontinence.

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