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SURGERY FOR FISTULA IN ANO (SIMPLE OR COMPLICATED)- OUR EXPERIENCE

Surgery

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ABSTRACT

INTRODUCTION: The treatment of fistula in ano, a chronic sepsis of cryptoglandular origin is primarily surgical. Morbidity of the treatment is mainly recurrence and incontinence.

AIM : To study the demographic profile of the patients with fistula in ano, analyze various aspects of fistula , to review our experience and postoperative outcome.

MATERIAL AND METHODS: Prospective observational study conducted between January 2016 to August 2018 in surgical gastroenterology department Government Mohan Kumara Mangalam Medical College Hospital, Salem. Fistulectomy , fistulectomy with seton or drainage with scooping for submucous type was done and results were analyzed.

RESULTS : Mean age of the study group was 43 years and mean follow up duration was 14 months. Recurrence was noted in three(4.6%) and incontinence was present in four(6.1%) .

CONCLUSION: Fistulectomy either alone or with cutting seton is a safe procedure for the treatment of fistula in ano . Incidence of incontinence was more with recurrent, multiple fistula in males and anterior fistula in females.

KEYWORDS

Fistula in ano, Fistulectomy , Seton, Anal incontinence

INTRDUCTION

Fistula-in-ano is the chronic phase of anorectal infection of cryptoglandular origin that is clinically characterized by chronic purulent drainage and cyclical pain, with or without abscess formation. This clinical condition does not heal spontaneously because of persistent closed sepsis within the fistula tract constantly entering through its internal opening. It has proven to be notorious for its chronicity, recurrences and frequent acute exacerbations. References to fistula in the anorectal region date to antiquity. Hippocrates (460 B.C) described the use of seton to cure fistula in anorectal region[1]. In 1376, the English surgeon John Ardene wrote treatises of fistula in anorectal region,whereby he described fistuotomy and seton use[2]. Surgery is the basic gold standard treatment of anal fistulas.

AIM

The aim is to study the demographic profile of the patients with fistula in ano, analyze various aspects of fistula , to review our experience and postoperative outcome.

METHODS

This is a prospective observational study and the study population included patients operated for fistula in ano from January 2016 to August 2018 at department of SGE, Government Mohan Kumara Mangalam Medical College Hospital, Salem. Exclusion criteria included anal fistulas associated with Inflammatory bowel disease, radiation, malignancy, preexisting faecal incontinence, or chronic diarrhea and rectovaginal Fistula. Details regarding clinical histories including presenting & duration of symptoms, previous surgery and chronic systemic illness were recorded in a pre structured proforma. The examination included perineal inspection, palpation, digital rectal examination, and proctoscopic evaluation. Inquiries were made to assess anal continence in each patient. The distance of the external opening from the anal verge was measured using a plastic scale at the time of clinical examination. Most of the patients underwent MRI pelvis with MR fistulogram or Trans Perineal ultrasonogram(TPUS)[3]. Very rarely fistulogram was done and none had trans anal ultrasonogram. All patients underwent colonoscopic examination after adequate bowel preparation with conscious IV sedation. Fistula was classified in terms of its relationship to the anal sphincter muscles as intersphincteric, trans-sphincteric, suprasphincteric, extrasphincteric, and submucosal types.

Surgical Technique

Examination under anaesthesia was done first. Fistulous tract and internal opening identified by injecting diluted Methylene blue with hydrogen peroxide. Fistula probe passed from the external opening into the internal opening. Fistulectomy , fistulectomy with seton or drainage with scooping of the cavity for submucous type of fistula in ano was done in either lithotomy or prone Jackknife position. U shaped incision enclosing the external opening and the incision tapered towards the internal opening. In case of multiple fistulae they were connected to make a single wound. A chunk of tissue was excised along with the internal opening and the tract. Side tracts were laid open and granulation tissue was scooped and if necessary cauterized with diathermy. When more than 30% of sphincter complex has to be sacrificed decision to use cutting Seton was made. 1 prolene suture material was used as seton and serially tightened as office procedure. Removal of the cutting seton with division of sphincter was done after minimum interval of 6 weeks. IV Cefatoxime & Metronidazole for three days were routinely used. All patients were followed up in the out patients clinic periodically . Time required for complete healing of the postoperative wound, which was defined as the time for complete healing to take place with no area with an unepithelized surface, was noted and healing time, complications recurrences and incontinence, were recorded. Operative failure was defined as persistence or recurrence of symptoms within six months of intervention. Assessment of continence was done by Clinical continence grading[4] after complete healing of wound as categorized below.

Category A: continent of solid and liquid stools and flatus (i.e. normal continence)

Category B: continent of solid and usually liquid stools but not flatus (no fecal leakage)

Category C: acceptable continence for solid stool but no control over liquid stool or flatus (intermittent fecal leakage)

Category D: continued fecal leakage

RESULTS

In our study population there were 54 male and 11 female patients(total 65) with male female ratio of 4.9:1 .Table 1 gives clinical characteristics

of fistula. Out of 65 patients, 52 had fistulectomy, fistulectomy with seton procedure in 7 patiens and fistulectomy with lateral sphincterotomy in 5 patients. Two patients with submucous type of fistula, drainage by scooping out the cavity was done. 64 patients were followed up. Table 2 & 3 shows the follow up details and operative outcome. Mean duration of follow up period was 14 months. Recurrence was observed in three patients (4.6%). In two out of three patients internal opening was not identified during the surgery. One with recurrence lost follow up and the rest were not willing for second surgery. Majority had minor incontinence during the healing time, three patient had incontinence to flatus(B) and one patient with multiple fistula and operated twice earlier had fistulectomy with seton procedure, complained of intermittent leakage(c). All the four patients had trans-sphincteric fistula. One female patient with anterior fistula had incontinence to flatus, other two patients were male with posterior fistula. Though post operative pain and longer healing time was observed more in those with fistulectomy and seton procedure, none had recurrence. One patient with multiple openings who underwent fistulectomy, was found to have tuberculosis on histology with good response to antituberculous treatment.

Table 1 Characteristics of Patients with Fistula in ano

	Number of Patients(%)
Sex	
Male	54 (83.07)
Female	11 (16.93)
Type	
Intersphincteric	28 (43.08)
Trans –sphincteric	34 (53.84)
Submucous	2 (3.07)
Openings	
Single	23 (36.51)
Multiple	40 (63.49)
Anterior	20 (31.75)
Posterior	40 (63.49)
Anterior & Posterior	3 (4.76)

Table 2 Study Results

Mean age	43 years	(SD* 12)
Mean Symptom Duration	19Months	(SD* 27)
Healing time with out seton	42 Days	(SD* 13)
Healing time with Seton	76 days	(SD* 13)
Mean Duration Follow up	14 Months	(SD* 9)

***Standard Deviation**

Table 3 Operative Intervention and Overall Outcome

Method of Treatment	Number of Patients	Recurrence	Recurrence Rate %	Incontinence	Incontinence rate %
Fistulectomy	52	3	5.7	3	5.77
Fistulectomy & Lateral Sphincterotomy	4	0	0	0	0
Fistulectomy & Seton Procedure	7	0	0	1	14.29
Drainage	2	0	0	0	0

DISCUSSION

Management of anal fistula remains a challenge for surgeons because of the anatomical location of the disease and the potential risks of postoperative recurrence and incontinence complications. Although the primary objective of operative intervention is to cure the fistula, equally important is to decrease the morbidity associated with each procedure. Various options to cure fistula-in-ano are fistulectomy, fistulotomy, fistula plugging, seton procedure, endorectal advancement flap, application of fibrin glue and fistula plug, ligation and excision of the intersphincteric tract(LIFT), laser abalation of fistulous tract, Video-Assisted Anal Fistula Treatment (VAAFT) and various combinations of these procedures.

Fistulotomy still remains one of the most commonly performed operations for anal fistula with a reported success rate ranging from 87% to 94% [5-7]. The highest operative success was achieved with fistulotomy and seton procedure[8]. Fistulotomy entails the division to various degrees of anal sphincter muscle, which may affect the patient's incontinence and adversely affecting the patient's quality of life. Postoperative incontinence rates reported in literature range between 6 and 40 percent [9 -12].The appropriate type of surgery is determined by the course of the fistula tract. Clinically significant morbidity like incontinence and recurrence, contributes to the surgeon's reluctance to intervene aggressively with invasive procedures that may contribute to non-eradication of infection and recurrence [13].Improper identification of internal opening was reported to be the most common cause of recurrence as per literature.

Cutting setons have been used for many years to manage complex fistula-in-ano[14]. For a cutting seton, the slow division of muscle as the seton becomes more superficial allows buildup of a fibrotic tract, with less muscle separation than, if a primary fistulotomy was performed.

The endorectal advancement flap involves mobilizing a partial-thickness flap comprising rectal mucosa, submucosa, and some muscle fibers. As with other modalities, reported success rates are variable with primary healing rates ranging between 65 to 93%[15 &16]. Fibrin Sealants consists of filling the fistula tract with the glue, and is often accompanied by tract debridement and or suture closure of the internal opening and provides a plug to prevent fecal contamination and a scaffold for native tissue ingrowth[17]. Study has shown that only 14% of patients experienced enduring freedom from fistula at 16 months after glue injection[18].The anal fistula plug (AFP) technique gained instant favor due to its simplicity, ease of performance, lack of disturbance to the surrounding tissue, and relatively high patient overall tolerance l.

The initial reported healing rate were 85 to 87 % [19 & 20] but long term follow up reported healing rates below 50% with some as low as 24%[21-25].

LIFT[26] technique seems to be a promising procedure that involves dissection into the intersphincteric groove, identification and encirclement of the trans-sphincteric fistula tract, ligation and division of the tract (plus or minus short tract excision), and debridement of the external opening. The intersphincteric incision is then closed loosely and it has been reported to have excellent outcome ,with minimal reported disturbances in fecal continence. Video-assisted anal fistula treatment (VAAFT)[27], is a minimally invocative and sphincter saving procedure for treating complex fistulas and has the added advantage to view the fistula from the inside of the tract so that it can be eradicated under direct vision using fistuloscope.

This study is to highlight simple procedures like fistulectomy with or without seton is safe with good outcome. Limitation of our study include small number of study subjects with lesser duration of follow up.

CONCLUSION

Fistulectomy either alone or with cutting seton can be practiced for the treatment of fistula in ano because of the simplicity and found to be safe with good outcome . Recurrence is common when internal opening was not identified during surgery. Incidence of incontinence was more in male patients with recurrent, multiple fistula and anterior fistula in female.

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