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Fistula in Ano-An Entity with Enigmas: what to do and what not to do

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Abstract

Background: Fistula-in-ano is the leading complication of perineal sepsis. Usually, a fistula has an external opening, a track, and an internal opening. Following infection and/or an abscess,External opening may appear acutely or with delayed appearance in a chronic manner. Management protocol for a fistula includesassessment of the extent of fistulous track &its relation to the anal sphincter muscle, control of infection,and finally, surgical treatment of the fistula & follow up.

The principles in management of anal fistula aredrainage of infection or necrotic tissue, closure of internal opening of fistula tract, and removal of fistulous tract with preservation of sphincter function. The objectives of the studyis to compare the per operative and post-operative complications, mean hospital stay in the treatment of fistula in ano with treatment options like fistulotomy, fistulectomy, and setons.

Methods: This is a comparative, prospective study of 60 patients who presented with their complaints to the Surgerical Outpatient department and who were admitted under the Department of General Surgery, P K Das Institute of Medical Sciences, Vaniamkulum, Palakkad, Kerala. Patients who met the inclusion criteria were included in this clinical study. Of the 60 patients selected for the sudy, 20 patients were surgically treated by fistulectomy, 20 by seton, 20 by fistulotomy over a period of 2 years.

Results: Most common age of presentation is 21-30 years and more common in males then females (M:F= 2.3:1). Most common per operative complication was bleeding which was seen more in patients undergoing fistulectomy. 36% of the patients wound healed in less than 1 week, 22% of patients wound healed in 1 to 2 weeks,15% of patients wound healed in 2 to 3 weeks, 9% of the patients wound healed in 3 to 4 weeks.

Conclusion: Fistula in ano is cured by various methods of surgery and higher antibiotics, local antibiotics with good post-operative wound management, like sitz bath without closing the wound and frequent/regular follow up.Seton technique is better compare to fistulectomy and which is better than fistulotomy.

Keywords: Fistula in Ano; Fistulotomy; Fistulectomy; SETON.

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Introduction

Fistula in ano denotes the chronic phase of anorectal sepsis and is characterized by chronic purulent drainage or cyclical pain associated with abscess reaccumulation followed by intermittent spontaneous decompression.

Anal fistula is a condition that has been described virtually from the beginning of medical history. It has been said that more surgeons' reputations have

been impugned because of the consequences of fistula operations than from any other operative procedure.

Fistulotomy means laying open or deroofing of the fistulous tract. Ablunt ended probe is passed through the external opening and taken out through internal opening. Tissue over the probe is incised. Epithelial lining of the fistulous tract is curetted out. Extra skin overlying the tract is excised. Multiple tractsif any were identified, and are also laid open1.

Fistulectomy was done under anaesthesia. With an elliptical incision around the external opening tissues fistulous tract was dissected with sharp dissection. Methyleneblue dye is injected to acts as a guide for identification of the tract and prevents the accidental injury to tract and the spincter. Sphincter muscle is separated from the tract during dissection. Complete dissection of the fistulous tract was done upto the internal opening and finally mucosal defect closed with delayed absorbable suture materials.If the tract ends abruptly without an internal opening, the dissection completed upto the level of methylene blue staining and tract excised.[2,3]

SETON is one of the modality in the treatment of fistula in ano. Materials used as seton can be amonofilament non-absorbable suture or a thin silastic tubing. Patient was put on lithotomy position, internal and external openings were identified with proctoscope.Then the SETON is passed through the external opening through the fistulous tract into internal opening and the end was brought out through anal opening. The two ends of the Seton were knotted with rodders knot to avoid discomfort to the patient. If cutting SETON is used,it is gradually tightened after a period of two weeks, so as to cut through the anal sphincter progressively.[4]

Complications of fistula surgery are myriad and include fecal soilage, mucous discharge, varying degrees of incontinence (gas and/or stool) and recurrent abscess and fistula.

The fact is that no one goes whole to the grave with perfect anal control following surgery if an anal fistula traversed a significant portion of the external sphincter. Clearly, the surgeon who is fortunate enough to have the opportunity to treat the patient initially is the one most likely to effect a cure, to limit morbidity, and to minimize disability. The improved surgical techniques and antiioticshas contributed to reduce in morbidity of the patient.

This study is an attempt to study the presenting symptoms, correlate the findings on examination and understand the pattern of post-operative recovery following surgery.

Objectives

To study the per operative and post-operative complications, mean hospital efficacy of different modalities of surgical approach in the treatment of fistula in ano.

Material and Methods

The comparative, prospective study of 60 patients who presented with their complaints to the OPD and admitted under the Department of General Surgery, P K Das Institute of Medical Sciences, Vaniamkulum, Palakkad, Kerala. These patients met the inclusion criteria set for this clinical study. The study was done over a period of 2 years.

The selected patients were done randomly assigned to groups using closed envelope method, after explaining the options of treatment and taking their consent appropriately will be subjected to a detailed history elicitation followed by thorough evaluation of risk factors and clinical features. Clinical examination including per rectal and proctoscopy was done in all patients.

They will then be subjected with baseline investigations and specific investigations like fistulogram, MRI if required in selected cases. Each patient will be individualized and treated accordingly. The outcomes will be documented using proforma and followed up for a period of 3 months to 1 year.

Sample size

60 cases adult patients with clinically diagnosed fistula in ano were included in the study.

Inclusion criteria for the study

- Low Anal Fistula
- High Anal Fistula

Exclusion criteria

- Fistula in ano associated with other perianal disorderslikeHemorroids and/or Fissure in ano.
- Fistula in ano associated uncontrolled with systemic medical conditions.
- Patient not willing for surgery.

Results

60 cases of Fistula in Ano were selected and randomly divided in for the three surgical modalities equally.

Group A: Fistulectomy Group

Group B: Fistulotomy Group

Group C: Seton Application

31.66% of the patients were in the age group of 21-30 years, 30% in the age group of 31-40 years, 30% in the age group of 41-50 years and 8.33% were in age group of 51-60 years. 47(78.33%) of the patients were males and 13(21.67%) females. 23(38.33%) patients were manual labourers, 11(18.33%) patients were agriculturists, 15(25%) patients were shopkeepers, 7(11.66%) patients were government servants, 3(5%) patients were housewives, 1(1.66%) patient students with statistically significant Chi-square value of 17.831, Degree of freedom 5 and p value 0.003.

96.66% of patients presented with discharge, 80% of the patients presented with pain, 80% of patients had past history of perianal abscess , 63.33% of patients presented with swelling , 16.66% of patients presented with pruritisani.

52(86.66%) patients presented with purulent discharge, 4(6.66%) patients presented with bloody discharge, 2(3.33%) patients presented with serous discharge with Chi-Square = 39.594; Df = 2, P-Value = 0.000.

58(96.66%) patients presented with low anal fistula and 2(3.33%) patients presented with high anal fistula with Chi-Square = 33.409; Df = 1, P-Value = 0.000. 42(70%) patients presented with fistulous opening posteriorly in the anal canal and 18(30%) anteriorlywith Chi-Square =5.000; Df = 1, P-Value = 0.025.

48(80%) patients had single fistulous opening, 6(10%) had 2 fistulous opening and 6(10%) had more than 2 fistulous openings externally with Chi-Square =26.606; Df = 2, P-Value = 0.000.

Post Operative Complications

Post Operative Complications	Fistule-ctomy	Fistul-otomy	Seton	Total	% (N=60)
Bleeding	0	2	0	2	3.33
Hematoma	1	0	0	1	1.67
Urinary Retention	4	6	0	10	16.67

3.33% of the patients had bleeding postoperatively, 1.67% of the patients developed hematoma, 16.67% of the patients developed urinary retention with statistically insignificant Chi-square =2.860; DF = 2; p=.05

Wound Healing Time

	Fistulectomy	Fistulotomy	Seton	Total	% (N=60)
<1 Week	12	0	10	22	36
1-2 Weeks	7	0	6	13	22
2-3 Weeks	1	4	4	9	15
3-4 Weeks	0	5	0	5	9
>4 Weeks	0	11	0	11	18

36% of the patients wound healed in less than 1 week , 22% of patients wound healed in 1 to 2 weeks ,15% of patients wound healed in 2 to 3 weeks, 9% of the patients wound healed in 3 to 4 weeks with statistically significant Chi-square = 30.202; DF = 6; p=.01.

Late Complications

	Fistulectomy	Fistulotomy	Seton	Total	% (N=60)
Recurrence	0	2	0	2	4
Disturbance of Continence	0	0	0	0	0

Discussion

In this study of 60 cases, 31.66% of the patients were in the age group of 21-30 years, 30% of the patients in the age group of 31-40 years , 30% of the patients in the age group of 41-50 years and 8.33% of the patients were in age group of 51-60 years. In Ramanujam et al[7] series 65.5% of the patients were in the age group 21-40 years compared to 61.66% in our study, 17.5 % of the patients in the age group of 41-50 years, 2.9% of the patients were in age group of 51-60 years. In our study Sex ratio was 3.61 and in Ramanujam et al seriessex ratio was 2:1.

In our study 96.66% of patients presented with discharge, 80% of the patients presented with pain, 80% of patients had past history of perianal abscess, 63.33% of patients presented with swelling, 16.66% of patients presented with pruritisani. In Vesilewsky and Gordon[8] series 65% of the patients presented with discharge, 34% swelling and 24% pain.

In our study, among discharge 86.66% of the patients presented with purulent discharge, 6.66% of the patients presented with bloody discharge, 3.33% of the patients presented with serous discharge. Goligher[9] study showed 84% had purulent discharge, 10 % had bloody discharge and 6% had serous discharge.

In our study, 3.33% of the patients had bleeding postoperatively, 1.67% of the patients developed hematoma, 16.67% of the patients developed urinary retention.

In this study, 53.33% of the patients wound healed in less than 1 week, 11.67 % of the patients wound healed in 1 to 2 weeks, 8.33% of the patients wound healed in 2 to 3 weeks, 8.33% of the patients wound healed in 3 to 4 weeks, 18.33% of the patients wound healed in > 4 weeks. In Vaselewsky and Gordon series 23% patients wound healing was less than 4 weeks, 40% in 5 to 8 weeks.

In this study, 2% patients showed recurrence in fistulotomy group. So the success rate being 100% in fistulectomy and seton group. Patients were followed for a period upto 1 year. 2 patients presented with recurrence of fistula in their 9th and 10th month of follow up. Most of the patients had responded to the treatment with complete healing. Recurrence was seen in those who underwent fistulotomy with multiple external opening. Lowanal fistula on an average heals within 6 weeks.

Conclusion

Fistula in ano is an important, leading disease that occurdue to crypto glandular infection (anal glands) and as a complication of ano rectal abscess. It can be cured by various methods of surgery and higher antibiotics, local antibiotics with good post-operative wound management, like sitz bath without closing the wound and frequent/regular follow up.

Diagnosis is by history, clinical examination, per rectal examination with discharging sinus and pain histopathological examination of Fistula tract gives the nonspecific etiology. Seton technique is better compare to fistulectomy and which is better than fistulotomy.

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