

Fistula in Ano – Division of Internal Sphincter as a Second Stage Surgery after Putting Medicated Seton/ Single Stage Medicated Seton Only - A Prospective, Comparative Study

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Abstract

Background: We do different procedures for the treatment of fistula in Ano – Fistulotomy, Fistulectomy, LIFT, VAFT, diversion and excision of tract. The idea is to prevent recurrence and incontinence of faeces and get the better results. Different types of setons are also used for intermediate and high fistula in ano. **Subjects and Methods:** In this study, we compared the relative safety of single stage surgery by putting medicated seton and 2 stage surgery (division of internal sphincter as a 2nd stage surgery after putting medicated seton in the 1st stage). In 15 patients, only medicated seton was put in the fistulous tract and we tried to cut the internal sphincter by tightening the medicated seton in follow up and seton was also changed at 2 weekly-interval. And in another 15 patients all the external portions of fistula were excised and medicated seton was put around the internal sphincter. 3,5,8,12 When external wound healed the internal sphincter was cut under anaesthesia. Chi square test was done for qualitative difference and student t-test was done for quantitative difference. Sample size was calculated for fistula at prevalence rate of 8.6 per lakh population. The error rate was 1.4 and standard deviation was 1.3 according to the different studies available. The p value less than 0.05 was considered statistically significant. Exclusion Criteria – Patient with immunocompromised status, very high supralelevator fistula. **Results:** Treatment of fistula in Ano by dividing the internal sphincter (after putting the medicated seton) in 2nd stage of surgery is a safe and effective method to decrease the recurrence rate in fistula in Ano. It also decreases the hospital stay and prevents the faecal incontinence compared to single stage division of internal sphincter. It also reduces the follow up visits of patients. It causes significantly less pain when compared to those patients where medicated seton is tightened to produce the cut effect on the internal sphincter. **Conclusion:** It can be safely said that division of internal sphincter can be done as a second stage surgery after putting the medicated seton in the first stage in complex anorectal fistulas.

Keywords: Fistula in Ano, Medicated seton, Internal Sphincter, Inter Sphincteric Sinuses, Inter sphincteric abscesses, Trans Sphincteric Fistula.

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Received: December 2018

Accepted: December 2018

Introduction

Fistula in Ano surgery is associated with a very high risk of recurrence rate. Low anal fistula can be treated with fistulotomy alone and in high anal fistula most of the surgeons are putting medicated seton and then trying to cut the sphincter by tightening the seton.^[1,2,9,10] The idea is, if you divide the internal sphincter in the first go it will cause faecal incontinence. So, by medicated seton you divide it slowly by tightening the seton.^[5,6,8,10] It is a very painful to tighten the medicated seton and it is a very lengthy procedure, sometimes it may take upto 3 months, sometimes complete division may not take place leading to recurrence of fistula.^[4,9,14] It has also been observed that there may be an abscess formation after putting the medicated seton alone which is common in secondary intersphincteric areas. If in the first surgery we remove all intersphincteric sinutract,^[4,14] open the abscess and excise the

part of external sphincter and put the medicated seton in the part involving the internal sphincter (means not removing all area involving external and internal sphincter causing high chances of incontinence). Once all external area is completely healed and the part of the external sphincter that was divided also got healed then in the second stage after 6 weeks internal sphincter can be divided because if medicated seton remains there for 6 weeks it can produce enough fibrosis in perianal area and the internal sphincter area. When we divide the internal sphincter after 6 weeks, it does not gape and faecal continence is maintained.^[3-6]

Subjects and Methods

- A prospective study was conducted in the department of General Surgery Teerthanker Mahaveer Medical College and Research Centre for 1 year. 30 Patients after written informed consent were selected for study. All patients for

Fistula in Ano were selected in the age group of 18 to 70 years. Very high supralelevator fistula and patients with immune compromised status were excluded from the study. All patients presented with external fistulous opening with discharge and internal opening for fistula on per-rectal examination were subjected to magnetic resonance fistulogram and all other investigations including viral markers, complete blood- counts, routine investigation for fitness, X-Ray chest. Post of biopsy of all fistulous tract was done. Patients included in the study had supra-sphincteric⁹ inter-sphincteric and low anal fistulas with connecting inter-sphincteric sinuses and abscesses. All low anal fistulas in which medicated seton was not put were excluded from the study. Patients were divided in 2 groups.

In first group internal and external opening was localised by putting methylene blue dye and the medicated seton was put under anaesthesia. In post-op period this medicated seton was changed at 2-weekly interval and tightened at weekly interval without any anaesthesia, to cause cutting effect on the internal sphincter. Procedure was continued till whole sphincter was cut and the medicated seton removed.

In the second group after establishing the internal and external opening by putting methylene blue dye and establishing the fact that the tract is going through the sphincter either supra sphincteric or inter- sphincteric only part of the fistula outside the internal sphincter was excised. Any high inter-sphincteric sinus tract was also excised. Any inter-sphincteric abscess was drained. And then, a medicated seton was placed around the internal sphincter. This seton was changed at 2-weekly interval.

After 6 weeks of fibrosis when external wound was completely healed and there was fibrosis around internal sphincter under anaesthesia this part of internal sphincter across medicated seton was divided and any granulation tissue if present was removed and so the medicated seton was also removed.

Post op dressing was done with sitz-bath was advised with lactulose syrup daily with broad spectrum antibiotic for 5-7 days in both the groups.

Results

Table 1: Total hospital stay and hospital visits

Groups	Group1 (Single stage medicated seton only)	Group 2 (Medicated Seton + Second stage surgery)	P-value
Total no. of patients	15	15	
Hospital stay	6	10	
Post op visit	8-10	4	Significant (<0.05)

[Table 1] shows mean duration of hospital stay in 2 groups. In group 1 when only medicated seton was put hospital stay was less as compared to the second group because these patients needed second hospital stay for the division of internal sphincter. But number of post-op visits were

statistically significantly less in the 2nd group because 1st group needed more hospital visits for the tightening of medicated seton

Table 2: Recurrence Rate

Groups	Group 1 (Single stage medicated seton only)	Group 2 (Medicated seton + Second stage surgery)	P-value
Total no. of patients	15	15	
No. of Patients	6	1	Significant (<0.05)

[Table 2] shows recurrence rate which was significantly higher in group1 as medicated seton either could not cut it completely or patient did not come for the follow up as effectively as advised due to fear of pain while tightening the medicated seton. Three patient loss for follow-up was considered as recurrence.

Table 3: Perianal abscess formation.

Groups	Group 1 (Single stage medicated seton only)	Group 2 (Medicated seton + Second stage surgery)	P-value
Total no. of patients	15	15	
No. of Patients	6	2	Significant (<0.05)

[Table 3] shows more formations of perianal abscesses in group1 compared to group2 because in group2 we were not planning to cut the sphincter so could excise all area involving the inter- sphincteric sinus and abscesses outside the internal sphincter. This was effectively done during the first stage of surgery in group2 patients so the result was statistically significant.

Table 4: Faecal incontinence.

Groups	Group 1 (Single stage medicated seton only)	Group 2 (Medicated seton + Second stage surgery)	P-value
Total no. of patients	15	15	
No. of Patients		1	Insignificant

Table 5: Complex Fistula⁶ with high inter sphincteric sinuses and abscess treated in both the groups.

Groups	Group 1 (Single stage medicated seton only)	Group 2 (Medicated seton + Second stage surgery)	P-value
Total no. of patients	15	15	
No. of Patients	2	7	Significant (<0.05)

[Table 4] shows the rate of faecal incontinence in both the groups. In group2 only 1 patient developed incontinence

due to division of internal sphincter which lasted for 3 weeks. In this patient there were high inter-sphincteric sinuses and tract in ischioanal fossa leading to wide excision of that area was probably the cause. Even in this patient after 3 weeks patient was full continent. So the p value was not significant.

[Table 5] As the table suggests significantly higher rate of cure for complex fistulas can be achieved in 2 stage medicated seton surgery as done in the 2nd group.

Table 6: Total Duration of treatment.

Groups	Group 1 (Single stage medicated seton only)	Group 2 (Medicated seton + Second stage surgery)	P-value
Total no. of patients	15	15	
Duration in Days	90-100	55-60	Significant (<0.05)

[Table 6] In table 6 total duration of treatment was statistically significantly less in second group i.e. 55-60 days compared to 90-100 days in the first group.

Table 7: Patient Compliance for treatment (Patient became absent for follow up)

Groups	Group 1 (Single stage medicated seton only)	Group 2 (Medicated seton + Second stage surgery)	P-value
Total no. of patients	15	15	
Absent after putting the medicated seton	3	0	Significant (<0.05)

[Table 7] It suggests 3 patients lost for follow-up in the post-op period due to more number of visits needed in the 1st group and pain in the procedure while tightening the cutting medicated seton. These patients were considered to be incompletely cured or recurrence.

Discussion

Discussion Here we have discussed the various techniques of fistula management while using seton.^[19] When a patient presents with anal fistula, it is important to determine the level of fistula, involvement of sphincters (high vs. low trans-sphincteric), abscess or local sepsis and the etiology.⁵⁶⁸ For low fistulas involving less than one-third of the sphincters, seton can be placed around sphincter, but you need not to cut it in first surgery.^[2,3,5] For trans-sphincteric⁴ with abscess and local sepsis, a medicated seton to act as drainage seton should be placed. Once the abscess has been resolved for a cryptoglandular fistula the treatment decision involves the use of cutting seton only or seton with second stage surgery.^[9] Medicated setons for such treatment can be considered either as a cutting or loose medicated seton after discussing with the patient.^[19] So

cutting medicated seton can be used as a single- or two-stage procedure or we can divide the sphincter later on as a second stage surgery when external part of fistula is healed and all abscess or high inter-sphincteric sinuses healed. Cutting medicated setons are not commonly used now a days because of the pain associated with treatment.^[19] If the patient is willing for this type of treatment then he can be advised the long-term loose medicated seton with the added option of cutting.

In our second group we have put the medicated seton in those patients in which fistulous tract has high inter-sphincteric sinus and abscesses and tract involving ischioanal fossa or going more than 2.5 cm outside the anal verge. In all these patients wide opening of abscesses, removal of inter-sphincteric tract leads to a lot of tissue defect lateral to internal sphincter with partial excision of external sphincter.^[5,6] After doing all this a medicated seton was put along the internal opening. Once all the external area is completely healed with resultant good sphincteric control due to fibrosis, internal sphincter was divided under anaesthesia (involving whole or part of internal sphincter). In no patient we have observed faecal incontinence after 4 weeks of surgery.

Conclusion

In treatment of fistula in Ano putting medicated seton and trying to cut the sphincter by medicated seton is not a very effective treatment. It does not cut the sphincter effectively and the procedure is very painful. While in those fistulas where more length of internal sphincter need to be cut due to intermediate or high fistula we can put the medicated seton in the first stage and internal sphincter can be divided as the second stage surgery under anaesthesia. It does not lead to incontinence due to fibrosis achieved by medicated seton for 6 weeks and the perianal fibrosis achieved while healing of the external wound. And the internal sphincter does not gape leading to good continence of faeces.

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How to cite this article: Kumar V, Kaul RK. Fistula in Ano – Division of Internal Sphincter as a Second Stage Surgery after Putting Medicated Seton/ Single Stage Medicated Seton Only - A Prospective, Comparative Study. *Asian J. Med. Res.* 2018;7(4):SG04-SG07. DOI: [dx.doi.org/10.21276/ajmr.2018.7.4.SG2](https://doi.org/10.21276/ajmr.2018.7.4.SG2)

Source of Support: Nil, **Conflict of Interest:** None declared.

