



Management of High Transsphincteric variety of Complex Anal Fistula with combined approach of Seton placement and Marsupialisation of fistulotomy tract.

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ABSTRACT

Introduction:

Anal fistula has been a common surgical problem reported since ancient times. The treatment options available for complex anal fistula are less than ideal because of high incidence of postoperative incontinence and recurrence. In this study we have analysed the results of a combination of Seton placement and fistulotomy with marsupialization in terms of clinical incontinence and recurrence.

Materials and methods:

80 patients diagnosed as having high transsphincteric fistula based on MRI findings were treated by the following method. Fistula tract and internal opening were identified using Hydrogen peroxide test, Fistula probe, and optionally Meniero's fistuloscope .

Extrasphincteric part was laid open as in fistulotomy and was marsupialised after the following step.

One tight and two loose setons were tied around the sphincteric part.

Results:

We have treated 80 patients with high transsphincteric fistula with the following method. We have analysed and presented the results in terms of recurrence and clinical incontinence. In a follow up ranging from 1 year to 5 years, 1.25% had recurrence and 6.25% patients had transient incontinence to flatus. None had clinically significant incontinence.

Conclusion:

The treatment of complex anal fistulas should be individualized based on the type of fistula, patient preference, surgeon's experience and the center at which the surgery is being performed. Combination of fistulotomy with marsupialization and Seton placement can be considered as a simple, effective and reproducible surgical option in the patients with high transsphincteric anal fistula.

KEYWORDS

Complex anal fistula, High transsphincteric fistula, Seton placement, Fistulotomy, Marsupialisation

Introduction:

Anal fistula has been a common surgical problem reported since the time of Hippocrates. Majority of fistulas result from infection in anal glands extending from the intersphincteric plane to various anorectal spaces. Till recent past, the most popular technique for treatment has been fistulectomy or fistulotomy. These are effective and safe treatment only for simple fistulas. However, even with simple fistulas, conventional surgery lands up 12% patients with some form of incontinence.^[1] Complex anal fistulas are difficult to treat. These include high transsphincteric, extrasphincteric, all anterior transsphincteric fistulas in woman. Conventional surgery such as fistulotomy and fistulectomy are out of question in view of sphincter injury and postoperative incontinence. It is no surprise therefore that there has been proliferation of many procedures for complex anal fistulas such as the VAAFT, LIFT, Fibrin glue, and the Plug technique to avoid sphincter injury and incontinence. However, each of the sphincter preserving procedures is associated with high risk of recurrence and multiple operations.

In the age of minimalism, the patients expect success with no or minimal wound and pain. Any incontinence is unacceptable by the patient and sometimes in the eyes of the law too. The ideal treatment should resolve the inflammation, maintain continence, and prevent recurrence. We want to study the effect of Seton placement combined with fistulotomy and mar-

supialization in the treatment of high transsphincteric variety of complex anal fistula where we treated the sphincteric part with Seton and the extra sphincteric part by fistulotomy and marsupialization. We analyzed the outcome in terms of recurrence and clinical incontinence.

Materials and Method:

This is a retrospective study conducted at Belle Vue Clinic, and The Calcutta Medical Research Institute, Kolkata (India) between 2009 and 2014. There were 80 patients who presented with high transsphincteric anal fistula based on MRI findings. All patients had their MRI evaluated by a single radiologist. Any fistula with tract crossing more than 1/2 of the external sphincter was defined as high transsphincteric. All complex anal fistulas were operated by the same technique and under Spinal anaesthesia in Lithotomy position with strapping of buttocks.

Hydrogen Peroxide test was performed to detect the internal opening. (Figure 1)

Fistuloscopy with Meniero's telescope (used in VAAFT) was done when Hydrogen Peroxide test failed to detect the internal opening.

The fistula probe was passed through from external opening to internal opening.

The extra sphincteric part was laid open as in fistulotomy. (Figure 2)

The intra sphincteric part of the complex anal fistula was dealt as follows:-

Cutaneous fibers of external sphincter was cut after deepening the skin incision. The mucosa and the internal sphincter was cut with diathermy till the level of internal opening.(Figure 3) Care was taken not to damage the external sphincter.

Three Seton were passed around the sphincteric part of the fistula. These were no-1 Nylon threads. One was applied tightly and the two were kept loose. (Figure 4) The patient was instructed to pull the loose Setons one week after procedure. Two loose Setons were given instead of one in case one broke during traction.

The extra sphincteric part of the fistula was marsupialised with 2-0 vicryl interrupted stitches between the dermis and edges of the fistula floor. (Figure 5)

Patients were discharged after 24 hours.

On discharge they were instructed to apply lignocaine 5% cream topically on the wound 4 times a day and wash the wound with copious soap and water. Analgesic was given for 3 days. No oral or local antibiotics were used.

The first follow-up check-up was done on the 7th day from the procedure. Further follow-up check-up was done 3 weeks and 6 weeks later and then annually.

Results:

We have included total 80 patients with complex fistula in ano. All were treated by the combined procedure of Seton insertion and marsupialization after fistulotomy. Out of 80 patients 74 were males. Age ranged between 22 to 56 years. None had any fistula producing disease like tuberculosis or Crohn's disease. 65(81%) patients had Seton removal by their own traction from 3rd week to 12th week. In 15(19%) patients, Seton did not come out and they were taken to the operation theatre at the end of 12 weeks for removal of Seton. Fistulas of all patients except one healed by the end of 12 weeks. 5(6.25%) patients reported transient loss of control of flatus. None complained about fecal incontinence. 20/80(25%) patients returned to work by third day after surgery and 72/80(90%) of patients joined work by 7th postoperative day. At a follow-up of 1 year to 3 years one patient had recurrence. All other patients were satisfied with the procedure.

Discussion:

Complex anal fistulas are difficult to treat. Due to the involvement of the anal sphincter, the treatment poses a high risk for impairment of continence. The treatment options available are Seton placement, fibrin sealants, bio prosthetic plugs, flap procedures, ligation of intersphincteric fistula tract(LIFT), video assisted anal fistula treatment(VAAFT).

Of these, fibrin sealants and fistula plug have dangerously variable success rate and very high recurrence.

VAAFT has shown promising results initially but it has a long learning curve, high intersurgeon variability, and is yet to prove its efficacy in long term.

LIFT, when done in experienced hands, have shown promising results with low rates of incontinence and about 74% success rate.^[2]

Seton treatment is still popular because of a higher success rate, simplicity, reproducibility, low cost, and modest sphincter damage.^[3] The loose Seton technique for trans-sphincteric anal fistula carries favorable results and can be safely applied while preserving the external sphincter function.^[4] Only Seton

placement resulted in 19% recurrence.^[5]

We identified the following pitfalls in the Seton treatment and addressed them as follows-

To improve on the success of identifying the internal openings of the fistulous tract, when hydrogen peroxide test failed to demonstrate it, we used the Meneiro's telescope (used in VAAFT). The irrigation under pressure attached to it helped in flushing out the debris in these cases and demonstrated the internal openings in difficult cases. The graspers that could be inserted through them helped in passing the Seton in difficult situations. A fistula probe may be more traumatic and misleading in these specific situations.

The large wounds created by fistulectomy were not practiced. We performed only fistulotomy. To

further minimize the wounds we marsupialised the wound by stitching the lateral edges of the fistula with the dermis of the wound. Systemic review has found Marsupialization after fistulotomy reduces bleeding and allows for faster healing.^[6]

We place three Setons – one tight and two loose. The tight Seton works on the principle of slow ischemia in the first few days. And then it loosens up. The loose Setons are brought to work after a week when the sensitivity of the wound is less. The patient is educated to pull the loose Seton like a

pulley on a daily basis after applying a lignocaine 5% cream on the wound to minimize pain. We place an extra loose Seton in case one breaks.

We did not perform anal manometry to test the continence since none complained of incontinence to liquid and solid stool.

This technique yielded a good result in our hands with a recurrence of 1.25% in a follow up ranging 1 years to 5 years with no clinically significant faecal incontinence.

Conclusion:

The treatment of complex anal fistulas should be individualized based on the type of fistula, patient preference, surgeon's experience and the center at which the surgery is being performed. In our experience of the 80 patients, the combination of fistulotomy with marsupialization and Seton placement can be considered as a simple, effective and reproducible surgical option in the patients with high transsphincteric anal fistula.



Figure 1: Demonstration of openings with Hydrogen peroxide injection through external opening



Figure 2: The extra sphincteric part was laid open as in fistulotomy.

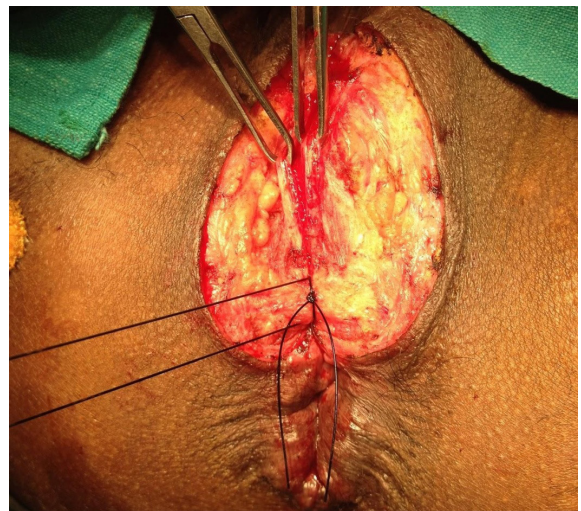


Figure 4: Tight and loose setons tied around the sphincteric part of the fistula

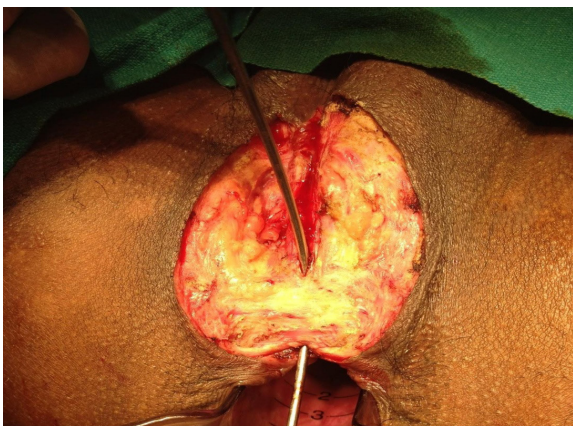


Figure 3: Cutaneous fibers of external sphincter were cut after deepening the skin incision. The mucosa and the internal sphincter was cut with diathermy till the level of internal opening.



Figure 5: Extrasphincteric part of the fistula marsupialised with 2-0 vicryl interrupted stitches between the dermis and edges of the fistula floor.

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