

# Submucosal Ligation Of Fistula Tract (SLOFT) for ano-rectal fistula: An effective and easy technique

Dilip Umakant Pathak, Vikesh Agrawal & Dr V K Taneja

## Abstract

The ideal treatment for ano-rectal fistula should aim towards low recurrence, early recovery and minimal incontinence. The various techniques are described for management of ano-rectal fistula and LIFT (Ligation of Inter-sphincteric Fistula Tract) and VAFT (Video-

Assisted Fistula Treatment) are the techniques in vogue but have their disadvantages. We describe the technique of Submucosal Ligation Of Fistula Tract (SLOFT) for ano-rectal fistula which we believe is an effective technique with the advantage of better cosmesis.

**Keywords:** anorectal fistula, fistula-in-ano, submucosal, ligation.

**Authors' addresses:** Dilip Umakant Pathak MS Consultant Coloproctologist, Jabalpur Hospital and Research Centre, Jabalpur, India 482002 Email: dupathak@gmail.com

Vikesh Agrawal MS MCh Consultant Surgeon, Jabalpur Hospital and Research Centre, Jabalpur, India 482002 Email: drvikeshagrwal@gmail.com

Dr VK Taneja Consultant Surgeon, Jabalpur Hospital and Research Centre, Jabalpur, India, 482002 Email: drvikeshagrwal@yahoo.co.in

## Introduction

Ano-rectal fistula is a complex disease with variety of options for its management such as fistulotomy, fistulectomy, seton, plug, fibrin glue occlusion, ligation of inter-sphincteric fistula tract (LIFT) and video-assisted fistula treatment (VAFT). [1-3] LIFT is associated with high recurrence and is technically difficult. [4] There remains a search for a technique which is cost effective, easy to learn, teach and perform and is associated with minimal complications. We describe the technique of Submucosal Ligation Of Fistula Tract (SLOFT) for ano-rectal fistula.

## Method

A prospective study was carried between January 2014 and April 2014 in the colorectal unit of Jabalpur Hospital and Research Centre. All cases with ano-rectal fistula were included irrespective of their age, sex, co morbidities, pathology and recurrence. Cases with malignancy and tuberculosis were excluded. After systematic history taking and general examination, a digital rectal examination (DRE) was performed to palpate the internal opening and the tract. The fistula was classified according to Park's classification. Ultrasound and other imaging techniques are not performed routinely in the unit's practice but are done selectively in multiple fistulae. Standard oral bowel preparation was performed with a rectal enema. Single dose antibiotic prophylaxis consisting of intravenous cefuroxime injection was given at induction. All cases were performed under spinal anaesthesia with the patient in lithotomy position.

*Technique:* Internal speculum examination is performed after gentle anal dilation to identify the internal opening/s. Saline solution or weak methylene blue is instilled through the external opening to aid in visualization of internal opening/s. A pliable copper probe is then inserted to aid the identification of the tract/s. Sub-mucosal and peri-tract injection of 2ml of 2% Xylocaine with 1:200,000 adrenaline is performed to minimize bleeding. An incision is made in the mucosa of the anal canal over the tract, 1.5 cm from the internal opening.

The tract is identified over the probe and is dissected all around to the nearest point possible to the internal opening in the sub-mucosal plane. The tract is ligated and divided with Polyglactin-910, 2-0, suture after withdrawal of the probe. 0.5 cm of tract is excised beyond the division, for histopathology. The mucosal incision is left unclosed and with a betadine pack for several hours. (Figure 1, 2) Patients are routinely advised post operatively regarding warm baths, cleansing the area, oral diclofenac pain relief, local antibiotic application and stool softener. Patients were followed weekly for the first month and then fortnightly for 3 months, and on each occasion examined for healing, abscess, recurrence, stenosis and incontinence.

## Results

This SLOFT technique was performed on 13 patients with a male to female ratio of 9:2 and the age range was 22–48 years. The distribution of fistula types according to Park's classification was: inter-sphincteric (9, 69.2%), trans-sphincteric (2, 15.3%), supra-sphincteric (1, 7.69%) and horse-shoe variant (1, 7.69%). One patient had non insulin dependent diabetes mellitus which was controlled medically before surgery. Mean hospital stay and days to return to work were 2 days and 5 days respectively. Follow-up ranged from 9 days to 3 months. One patient developed a sub-mucosal abscess at the site of surgery on the 60th post operative day which was treated with surgical drainage. As there is no scar in the skin, the cosmesis was excellent. None had stenosis or incontinence in the mentioned follow-up.

## Discussion

The ideal treatment for ano-rectal fistula should aim towards low recurrence, early recovery and minimal incontinence. [1] The various techniques described for management of ano rectal fistula are fistulotomy, fistulectomy, seton, plug, ligation of inter-sphincteric fistula tract (LIFT) and video-assisted fistula treatment (VAAFT). [1] LIFT and VAAFT are the techniques in vogue following the concept

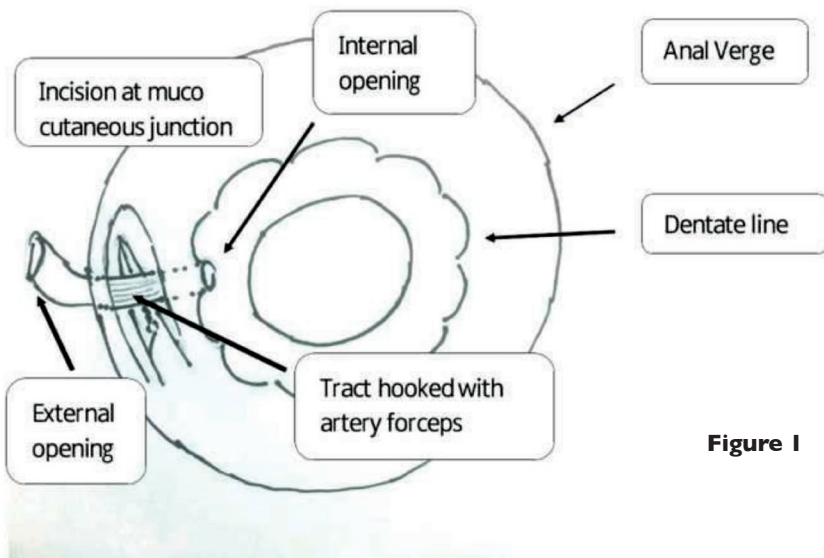


Figure 1

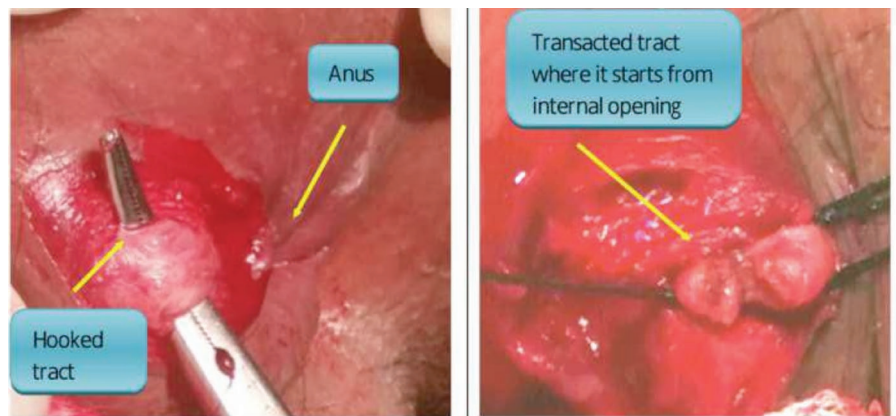


Figure 2

of ligation and division of fistula tract under vision but have certain limitations. [2,3] LIFT had advantages of lesser recurrence and minimum morbidity in terms of wound complications and continence but it is technically more demanding especially in high and ascending tracts, has higher chances of intersphincteric abscess, has chances of internal sphincter damage and leaves an external scar. [1,3,4] VAAFT has better visualization, is less invasive, obliterates whole of the tract, has lesser chances of recurrence and has better cosmesis but involves limitation of availability and is cost-ineffective. [3]

There is always a need of a procedure which is easy to learn and teach, has lesser complications, early recovery and cost-effective. We believe SLOFT has all those advantages. Moreover, it avoids disadvantage of LIFT of going through the inter-sphincteric planes and the potential for sphincter damage, especially in the hands of a novice and gives no external scar. It has both the advantages of LIFT and VAAFT. The limitation of the SLOFT is the need of a mature tract for ligation and is not applicable for acute ano-rectal fistula or associated inflammation. One of the patients in the present study had a perianal abscess formation that had diabetes and acute ano-rectal fistula with a friable tract and is the only complication in present study. The abscess which developed in the present case was sub-mucosal, which was easier to manage as compared to inter-sphincteric abscess seen in LIFT. Although LIFT and VAAFT stays as good procedures for ano-rectal fistula in the hands of experts and equipped, but they are technically more demanding and have not stood in the test of clinical trials. [5] SLOFT is an easy, effective and safe technique, but a long-term study and follow-up on larger number of patients is needed.

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