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Low Transsphincteric Anal Fistula: Limited Fistulectomy and Placement of a Draining Seton in a Two-Stage Therapeutic Strategy

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Abstract: **Review Article**

We report the case of a 45-year-old patient with no significant past medical history who was admitted for anal pain associated with discharge. Clinical examination identified an inflamed para-anal external opening, and endoanal exploration demonstrated a low internal opening consistent with a low transsphincteric anal fistula. The procedure was performed under spinal anesthesia in the gynecologic position. The first-stage surgical management consisted of limited fistulectomy of the inflamed external component followed by placement of a loose draining seton across the residual transsphincteric segment. The immediate postoperative course was uneventful. A second-stage procedure is planned depending on local evolution, either by FiLaC® or by targeted fistulotomy with seton removal.

Keywords: Anal Fistula, Low Transsphincteric Fistula, Fistulectomy, Draining Seton, FiLaC, Fistulotomy.

INTRODUCTION

The Parks classification remains the anatomical reference framework for describing anal fistula tracts and differentiating intersphincteric, transsphincteric, suprasphincteric, and extrasphincteric types [1]. The 2022 ASCRS and 2024 ESCP guidelines emphasize that the operative strategy should be individualized according to tract anatomy, sphincter function, septic context, and the risk of continence impairment [2, 3].

In simple low fistulas, fistulotomy remains a standard option in appropriately selected patients, with high healing rates. However, when the external component is markedly inflamed, when deep anatomy requires confirmation, or when a sphincter-preserving approach appears preferable, a two-stage strategy including drainage with a seton may be considered [2-5].

We report here an illustrated technical note describing the first stage in the treatment of a low transsphincteric anal fistula managed by fistulectomy of the external component and placement of a draining seton, with a planned second stage using either FiLaC® or secondary fistulotomy.

Case Presentation

A 45-year-old patient, with no reported significant past medical history, was admitted for anal pain associated with discharge. Perineal examination showed an inflamed

para-anal external opening of chronic appearance, with local skin changes and suppuration. Endoanal exploration identified a low internal opening within the anal canal, consistent with a low transsphincteric anal fistula.

The procedure was performed under spinal anesthesia in the gynecologic position after standard antiseptic preparation. The therapeutic plan consisted of an initial sepsis-control stage by resection of the inflamed external component and drainage of the residual tract, followed by a delayed definitive procedure depending on local evolution.

Operative Technique

1. Perineal inspection and identification of the external opening

Exploration began with inspection of the perineum after positioning. The external opening appeared prominent and inflamed, with a budding aspect and purulent discharge, consistent with an exacerbation of a chronic fistulous tract.

The cutaneous topography and surrounding scar changes were identified before any incision in order to plan the axis of dissection and limit excision to pathologic tissues.

Figure 1: Initial Clinical Appearance Showing an Inflamed External Opening with Purulent Discharge

Figure 2: Intraoperative Identification of the External Opening After Positioning and Exposure of the Perineum

2. Endoanal identification of the internal opening

Anoscopy was then performed. Injection through the external opening helped identify the endoanal point of communication.

The internal opening was visualized low in the anal canal, confirming the low nature of the tract and supporting a cautious sphincter-preserving strategy.

Figure 3: Endoanal Identification of the Internal Opening by Anoscopy and Injection through the External Opening

Figure 4: Anoscopic Visualization of a Low Internal Opening in the Anal Canal

3. Limited Fistulectomy of the External Component

An elliptical incision encompassing the external opening was performed. Dissection followed the tract along its peripheral subcutaneous and extrasphincteric segment.

Fibro-inflammatory tissues were progressively resected down to the sphincter plane, without attempting immediate complete transsphincteric excision. The objective was local sepsis control and exteriorization of the external segment of the tract.

Figure 5: Fistulectomy of the External Component with Progressive Exteriorization of the Fibro-Inflammatory Tract

Figure 6: Mobilization of the Fistulectomy Specimen and Exposure of the Operative Cavity

4. Deep stage and catheterization of the residual tract

At the deep level, the residual tract was individualized in contact with the sphincter complex. Atraumatic catheterization was performed to confirm continuity between the fistulectomy cavity and the internal opening.

This step is essential to avoid blind sphincter division and to document the low transsphincteric nature of the fistula.

Figure 7: Atraumatic Catheterization of the Residual Tract in Contact with the Sphincter Complex

5. Placement of a Draining Seton

After atraumatic traversal of the tract, a soft draining seton was placed and loosely tied without excessive tension.

Here, the seton acts as durable drainage for the residual transsphincteric segment. Its purpose is to control sepsis, promote tract maturation, and prepare a second therapeutic stage under better local conditions.

Figure 8: Passage of a Draining Seton through the Residual Tract

Figure 9: Loose Tying of the Draining Seton at the End of the Procedure

Postoperative Course

The immediate postoperative course was uneventful, with no reported intraoperative complication or significant bleeding event. Local follow-up, perineal hygiene care, and specialist surveillance were organized. The patient will be reassessed for discussion of definitive treatment, either by FiLaC® or by targeted fistulotomy with seton removal, depending on clinical evolution and local findings.

DISCUSSION

Treatment of a low anal fistula requires a constant balance between septic eradication and functional preservation. ASCRS guidelines state that simple low fistulas in selected patients may be treated by fistulotomy with healing rates above 90%, and a minimal risk of clinically significant incontinence when less than one third of the external sphincter is involved [2]. They nevertheless emphasize the need for caution whenever anatomical uncertainty or functional risk exists [2].

In this context, the strategy used here—limited fistulectomy of the external component followed by drainage of the residual transsphincteric segment with a seton—fits within a sequential treatment approach. ASCRS reports that a strategy combining partial fistulotomy with draining seton followed by secondary fistulotomy may be relevant in selected low transsphincteric fistulas [2]. Likewise, Lim *et al.*, showed that staged drainage with a seton was associated with a low overall recurrence rate (6.5%) and a limited incontinence rate (3.8%) in a retrospective series [4].

Regarding the second stage, recent data do not show clear superiority of fistulectomy over fistulotomy for simple fistulas, as the meta-analysis by Quinn *et al.*, found no conclusive difference in healing or recurrence [5]. Therefore, the choice should remain individualized according to the final tract anatomy, the degree of local sepsis control achieved, and the patient's continence risk profile.

FiLaC® is an acceptable sphincter-preserving option for the second stage. In the series by Giamundo and De Angelis, long-

term primary healing after FiLaC® was 66.8%, with better results when drainage with a seton had previously been used [6]. A more recent meta-analysis by Duda *et al*., reported a pooled primary healing rate of 57.46%, confirming the interest of the technique while underscoring the heterogeneity of results [7].

CONCLUSION

Limited fistulectomy of the external component combined with placement of a draining seton represents a logical first step in the management of a low transsphincteric anal fistula when local sepsis control is required and maximal sphincter preservation is sought. This strategy makes it possible to control suppuration, clarify tract anatomy, and prepare a second stage using FiLaC® or targeted fistulotomy under better conditions.

Ethical and Declarative Considerations

- Patient consent: to be explicitly confirmed before submission, particularly regarding the scientific and editorial use of anonymized operative photographs.
- Conflicts of interest: to be completed by the authors.
- Funding: to be completed by the authors.
- Author contributions: to be completed according to the requirements of the target journal.

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