Sphincter Saving Fistula Surgery

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What are the goals of surgery?

- The primary goals of operative treatment for fistula-in-ano are:

1. Obliteration of the internal opening.
2. Curretage of the epithelialized tracts.
3. Preservation of anal sphincter function.

- So, there is no single technique is appropriate for management of all fistulas.

- Treatment must consider:

✓ cause.

✓ anatomy of the fistula tract.

✓ the degree of symptoms.

✓ patient comorbidities.

✓ surgeons experience.

Why we need a sphincter saving procedure?

1. High fistulae (transsphincteric infralevator, supralevator, suprasphincteric, and extrasphincteric fistulae).

1. Multiple tracts even a single missed tract will lead to recurrence.

1. Associated abscess as this increases the risk of sphincter damage if definitive surgery is performed, and there is lack of consensus as to whether this condition should be managed as a single stage or in multiple stages.

4. Internal opening not found, this happens in 10%–22% of patients operated for anal fistula.

- It has also been found that of all the risk factors associated with recurrence of anal fistulae, non detection of the internal opening was associated with the highest risk.

Sphincter saving procedures:

1- Fistulotomy.

2- Endorectal advancement flap.

3- Ligation of the intersphincteric fistula tract (LIFT) procedure.

4- The anal fistula plug and fibrin glue.

5- VAAFT and FiLaC.

6- Seton.

1- Fistulotomy:

- Fistulotomy for high-lying or otherwise complex fistulas result in significant postoperative incontinence in 10% to 40% of patients.

- Risk factors for postoperative anal sphincter dysfunction after fistulotomy include:

✓ preoperative fecal incontinence.

✓ recurrent fistula.

✓ female sex with anterior fistula.

✓ previous anorectal surgery or occult sphincter damage from previous birth trauma.

2- Endorectal advancement flap:

- **It consists of:**

✓ curettage of the fistula tract.

✓ suture closure of the internal opening.

✓ and covering the internal opening with a mobilized segment of rectum.

ADVANCEMENT FLAPS

Endorectal

- Fistula tract probed
- Flap raised
  - Mucosa +Int. Sphincter
- Internal opening excised/closed
- Flap advanced & sutured

- A meta-analysis reports healing in 66% to 87% of patients after initial endorectal advancement flap for cryptoglandular fistula.

- Endorectal advancement flap repeated after a failed flap procedure or performed after other failed initial approaches including LIFT is associated with healing rates ranging between 57% and 100%.

- **Factors associated with endorectal advancement flap failure include:**

✓ history of pelvic radiation therapy,

✓ underlying Crohn’s disease,

✓ active proctitis,

✓ history of abscess drainage,

✓ smoking,

✓ obesity,

✓ having more than one previous attempted repair.

- **From a technical standpoint:**

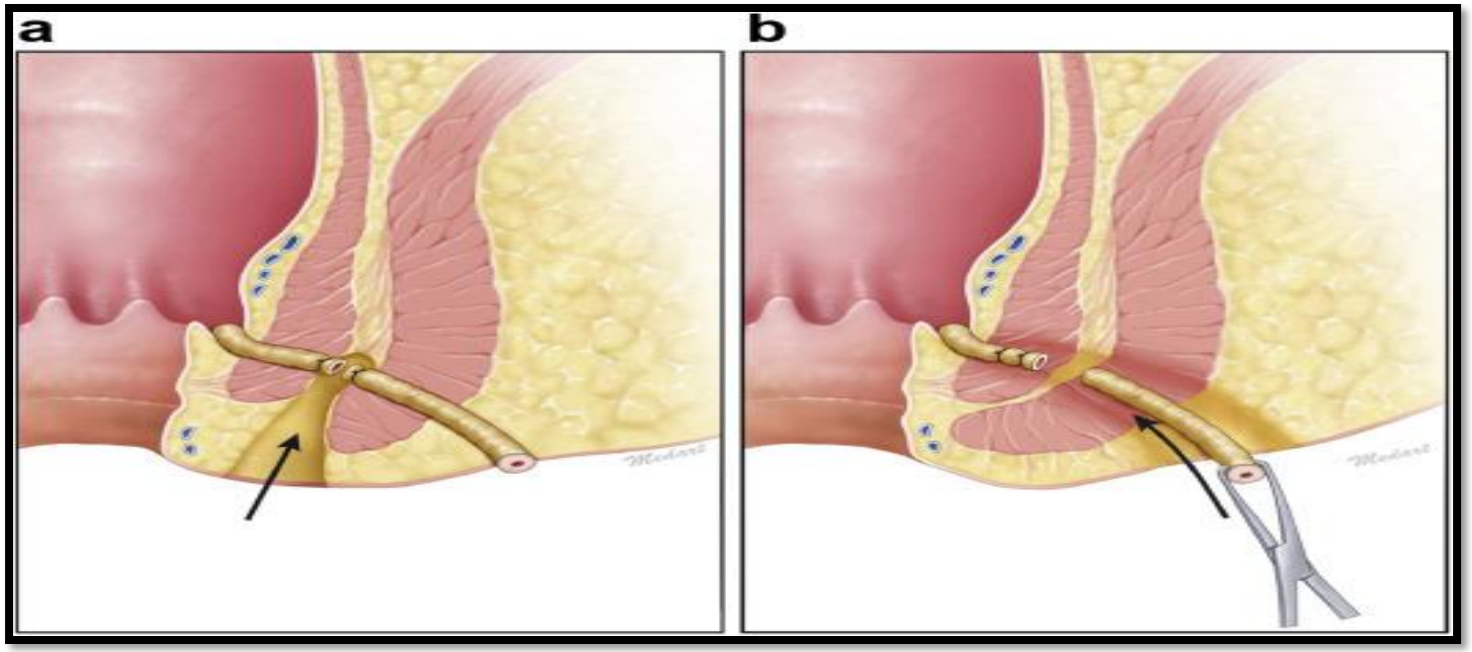
- ✓ Internal anal sphincter fibers may be included in the flap to preserve blood flow.

- ✓ Endorectal advancement flaps in the posterior position, especially in men with deep buttocks, can be technically challenging.

- ✓ In patients with fistulas with an internal opening distal to the dentate line, endorectal advancement flap may result in mucosal ectropion.

3- Ligation of the intersphincteric fistula tract (LIFT) procedure:

- The LIFT procedure involves suture ligation and division of a fistula tract in the intersphincteric plane.



- It was reported that an overall success rate of 76%, an overall complication rate of 14%, and a fecal incontinence rate of 1.4%.

- Other studies evaluating long-term LIFT outcomes have demonstrated lower rates of primary healing, ranging from 42% to 62%.

- However, the LIFT procedure has been associated with significant rates of secondary healing after surgical reintervention (fistulotomy) ranging from 77% to 86%.

LIFT modifications

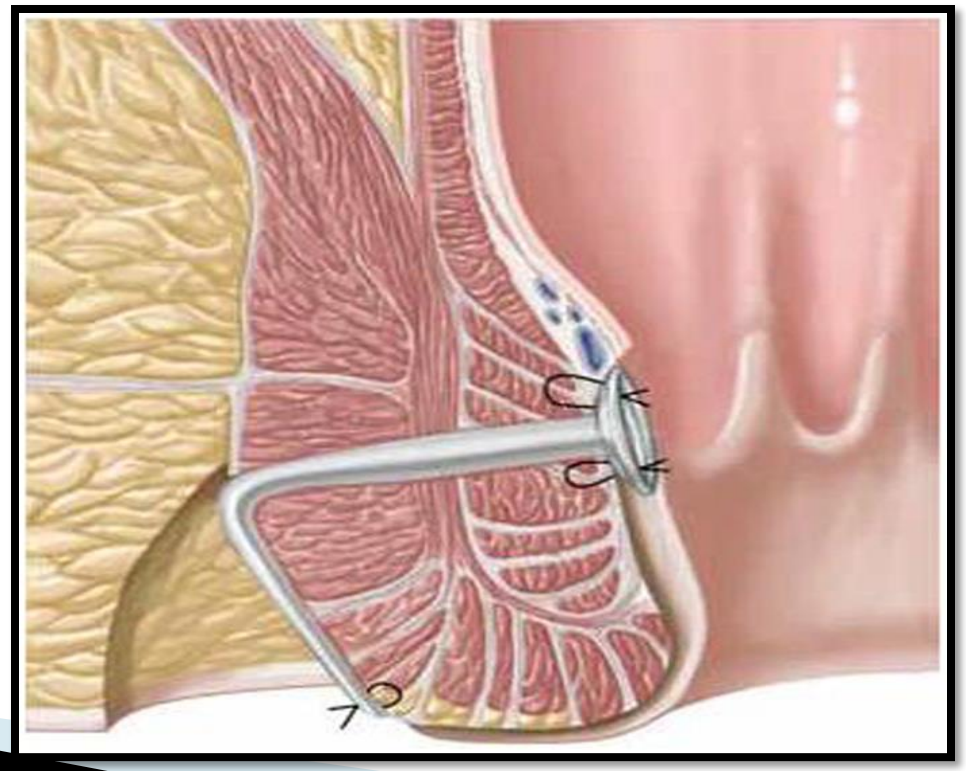
- A draining seton may be used before the LIFT procedure to allow for fibrosis of the tract that may facilitate the procedure, but this has not been shown to affect the success rate.

- Fistulotomy for the lateral part of the tract, incorporating a fistula plug or biologic mesh, have been described and, in some studies, are associated with improved healing rates compared to the standard technique.

- However the evidence evaluating these techniques is limited to small studies and such modifications to the standard LIFT technique are typically not recommended.

4- The anal fistula plug and fibrin glue:

- The bioprosthetic anal fistula plug, an acellular collagen matrix used to close the internal fistula opening.



- Although early data demonstrated 70% to 100% success with the plug, more recently published outcomes have been less encouraging with healing rates of 50% or less.

Fibrin glue

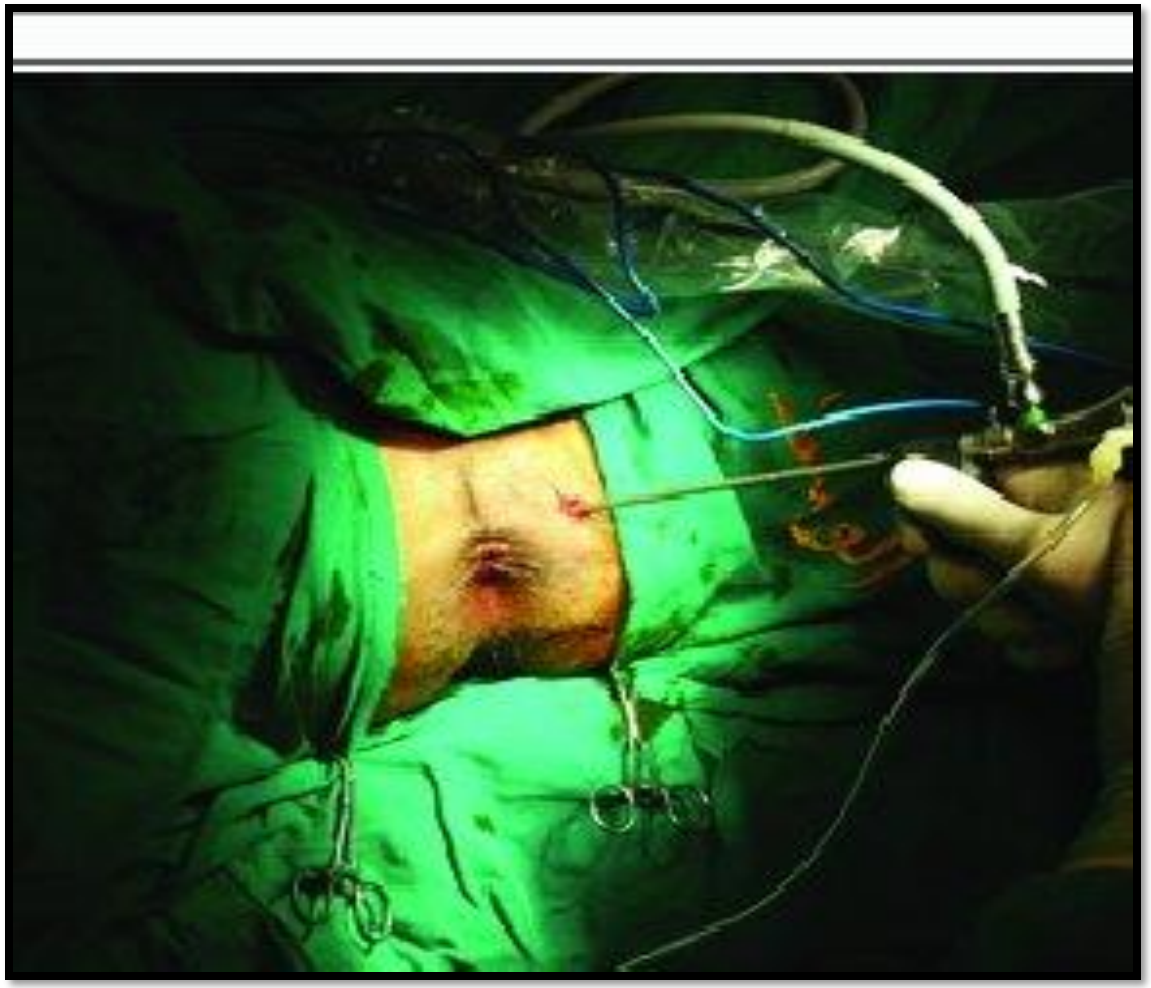
- Despite historical data with encouraging results, usage of fibrin glue injection for treating anal fistulas has decreased in popularity because of disappointing new data.

According to the ASCARS:

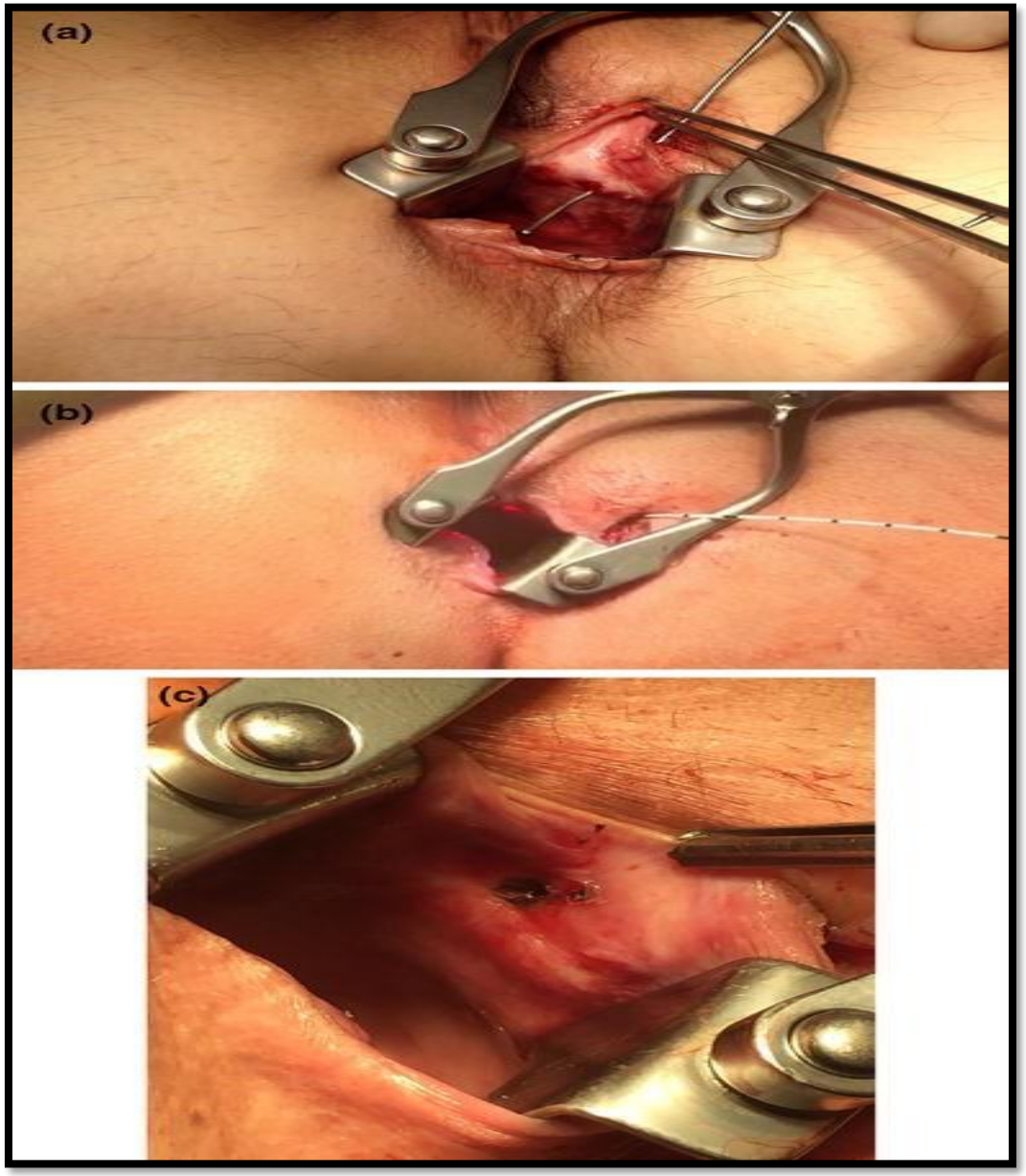
- The anal fistula plug and fibrin glue are relatively ineffective treatments for fistula-in-ano.

5- VAAFT and FiLaC:

- VAAFT technique involves fistuloscopy through the external opening to identify the internal opening, closure of the internal orifice with sutures, clips, or a stapling device, and selective debridement or obliteration of the fistula tract.



- FiLaC uses a radially emitting laser probe that, when passed along the tract, traumatizes the epithelium and, in theory, obliterates the fistula tract.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According to the ASCARS:

- Minimally invasive approaches to treat fistula-in-ano that use endoscopic or laser closure techniques have reasonable short-term healing rates but unknown long-term fistula healing and recurrence rates.

6-Seton:

- Complex anal fistulas are often treated initially by placing a draining seton to control the local sepsis, followed by a staged, definitive procedure to eradicate the fistula.

- Healing rates under these circumstances range from 62%to 100%, depending on the type of definitive operation used.

- A cutting seton may be left in place and tightened at intervals, gradually dividing the fistula and any involved anal sphincter.

- Although, it was suggested that a cutting seton is effective and safe for the treatment of anal fistulas, especially complex fistulas, this technique can result in functional impairment and should be used in acarefully selected patients.

Thank you