RECTO-VAGINAL FISTULA - 2

Introduction

- Recto-Vaginal Fistulas (RVF) are uncommon (account for less than 5% of all anorectal fistulas)
- Defined as epithelium-lined tract through the recto-vaginal septum
- RVF pose a formidable therapeutic challenge for surgeons and all available procedures have significant failure rates
- Presentation includes passage of flatus or stool from the vagina, proctitis, fecal incontinence, vaginitis

Etiology

- Obstetrical Injury
    1. Most common cause of RVF (up to 88% published series)
    2. Third – Fourth degree tear
        a. 5% of all vaginal deliveries result in 3rd or 4th degree tear, 1-2% of those develop RVF
        b. The fistula presents immediately post-partum from failed recognition of 4th degree tear or in 7-10 days after apparently normal repair
- Trauma
    1. Operative: vaginal hysterectomy, LAR, hemorrhoidectomy, rectocele repair, local excision of rectal tumors, restorative proctocolectomy with ileal J-pouch
    2. Penetrating or blunt trauma, coital injury
- Inflammatory
    1. IBD – Crohn's disease – second most common cause of RVF
    2. Endometriosis
- Infections
    1. Crytoglandular abscess
    2. Diverticulitis (located in upper rectum, women after TAH)
    3. TB, amebiasis, schistosomiasis, lymphogranuloma venerum
- Pelvic Radiation – RVF occur within 2 years of completion of radiation
- Malignancy – rectum, anus, vagina, perineum, leukemia, metastatic disease

Classification

Type	Size	Location	Etiology
Simple	< 2.5 cm	Low/mid	Trauma, infection, IBD, radiation
Complex	> 2.5 cm	High	Malignancy, previous repairs

Evaluation

- Physical exam
    1. Most fistulas can be palpated on bimanual exam (anterior midline crater)
    2. Digital rectal exam assess evidence of abscess or induration, strictures or sphincter defects
    3. Visual inspection shows dark red epithelium of fistula contrasting with the pale vaginal mucosa
- Anoscope or sigmoidoscopy – adequate for evaluation of most fistulas
- Fistula biopsy should be performed in patients with history of radiation or cancer
- Endoanal ultrasound performed in patients with an obstetrical injury or symptoms of incontinence to determine the presence of sphincter defects
    1. The internal sphincter is seen as a uniform hypoechoic circle immediately below the submucosa. Defects are easily identified.
    2. The external sphincter fibers are hyperechoic, striated, more loosely arranged, and defects are more difficult to detect sonographically
- Manometry: useful for evaluation of RVF due to IBD or radiation
- Tampon methylene blue test: used to evaluate fistulas that are difficult to detect
- Contrast studies: may be needed if the above maneuvers do not demonstrate the RVF including: vaginography, barium enema, or CT

Surgical Treatment

1. Categorized into: local, abdominal, and tissue transposition procedures
2. The primary aims are to preserve sphincter function and RVF closure
3. Success of the treatment depends on:
    a. Correct classification of the RVF
    b. The condition of the surrounding tissue (surgical intervention should be delayed until the tissue is without evidence of inflammation and infection).
    c. The status of the sphincter
    d. The number of previous repairs

Local	Abdominal	Tissue Transposition
Vaginal Layered closure Fistula inversion Mucosal advancement flap	**Bowel resection** Low anterior resection Coloanal anastomosis Abdominoperineal resection	**Local** Martius bulbocavernosus Cadaveric dermal allograft
Transanal Layered closure Rectal advancement flap Cutaneous advancement flap	**Layered closure** Open Laparoscopic Tissue interposition (omentum)	**Regional** Gracilis Satorius Gluteus maximus Rectus
Perineal Fistulotomy Perineoproctotomy Sphincteroplasty	**Diversion** Colostomy Ileostomy	**Other** Omentum
	Onlay Patch Anastomosis Bricker	

- Simple fistula
    1. Intact sphincters: most common transanal approach is the rectal advancement flap (figure 1). Success rates 40 – 100%
    2. Sphincter defects: sphincteroplasty procedure of choice
- Complex fistula
    1. May need diversion to treat infection and inflammation (IBD)
    2. Radiation induced fistulas: no evidence that diversion will allow inflammation to subside; may need LAR or coloanal anastomosis

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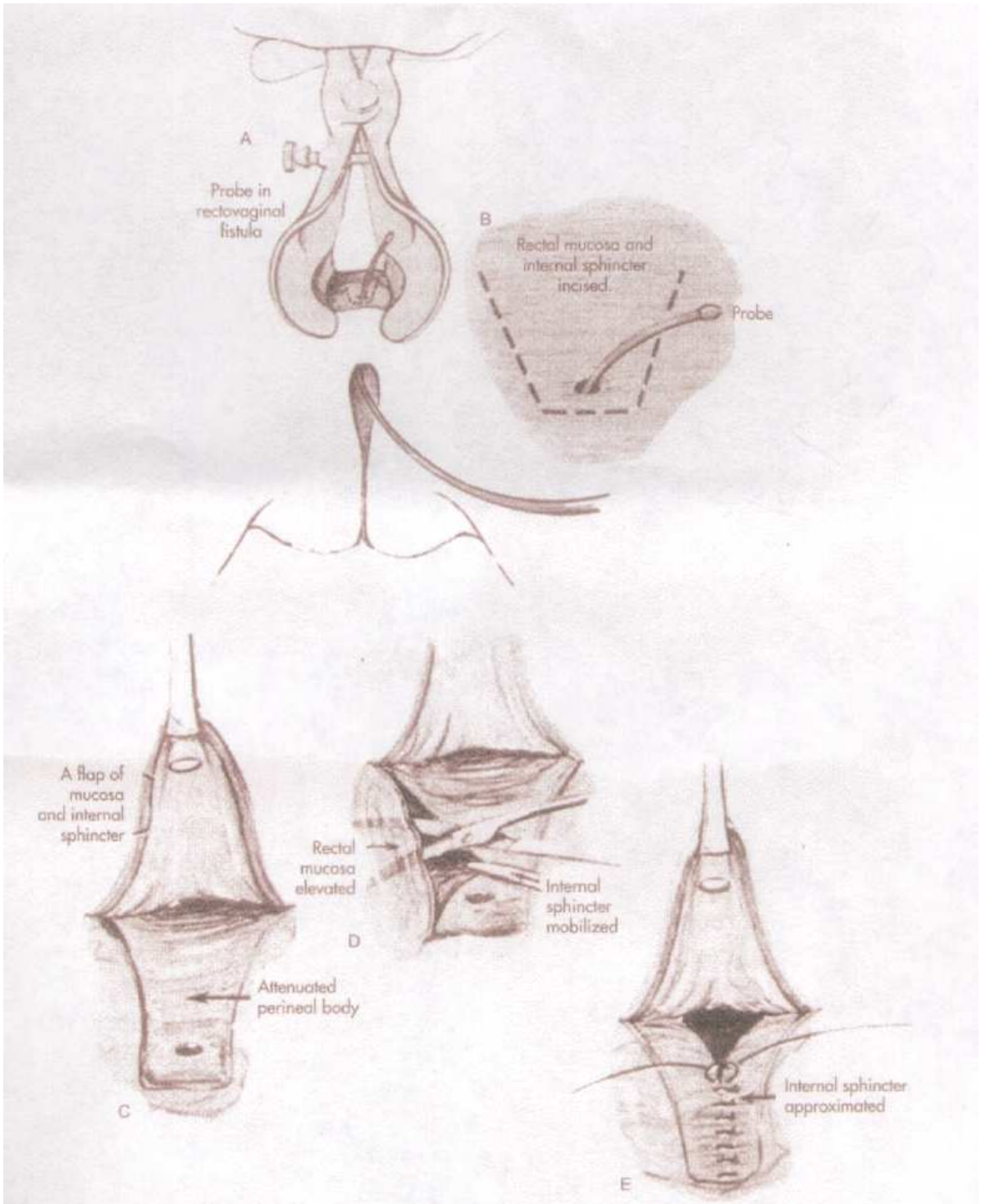

Figure 1

A, Probe in rectovaginal fistula with patient in prone jack-knife position. **B,** Endorectal flap of mucosa, submucosa, and circular muscle is outlined. **C,** Width of flap is at least twice the base and length sufficient to provide tension-free suture line. **D,** Internal sphincter muscle is mobilized laterally. **E,** Sphincter muscle may be approximated transversely as shown or longitudinally. *(From Cameron JL: Current surgical therapy, ed 4, St Louis, 1992, BC Decker.)*

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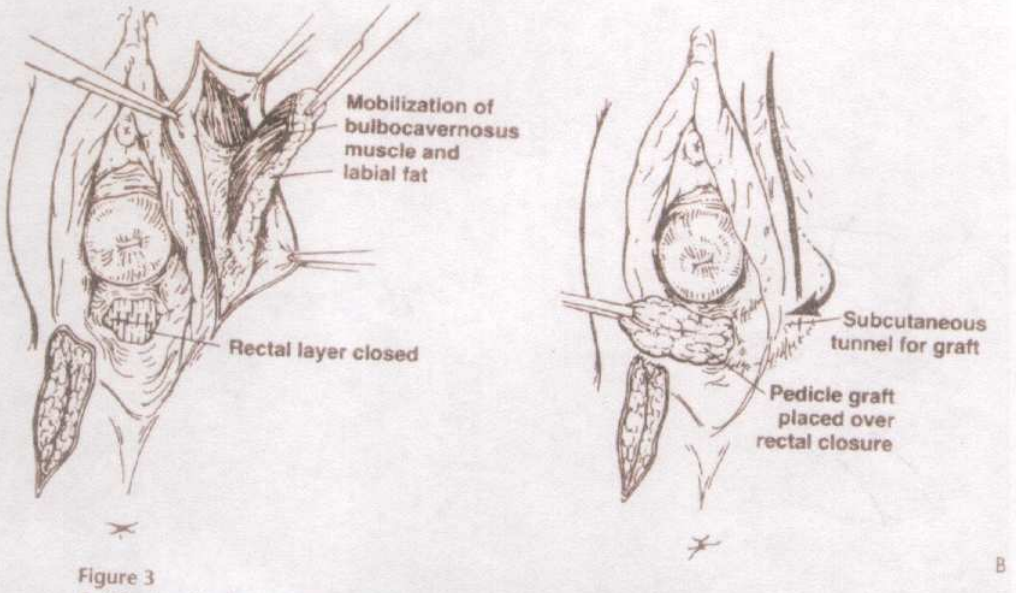

Figure 3

A, After the fistula has been excised and the edges have been debrided, the rectal muscles are closed. The bulbocavernosus muscle and labial fat pad are mobilized. **B,** The graft of bulbocavernosus muscle and fat pad are passed through a subcutaneous tunnel to cover the rectal closure. *(From Beck DE, Wexner SD:* Fundamentals of anorectal surgery, *New York, 1992, McGraw-Hill.)*