

RECTO-VAGINAL FISTULA

Definition: A communication between the rectum, proximal to the dentate line, and the vagina. Low, mid and high fistulas depending on location.

Epidemiology:

- Obstetrical injuries are the most common cause of rectovaginal fistulas, occurring in up to 88% of published series (*Dis Colon Rectum 1988;31:676-8*).
- Approximately 1% to 2% of third- to fourth-degree perineal lacerations following labor will lead to a persistent rectovaginal fistula
- Crohn's is the second leading cause.
- Prior surgery
- Cryptoglandular infection is leading infectious cause with tuberculosis, lymphogranuloma venereum, schistosomiasis, and diverticulitis following in no particular order.
- Neo-adjuvant therapy:
- Radiation

Pathophysiology:

- Low: Midline episiotomies, foreign body penetration, Crohn's, rectal/vaginal or cervical cancer
- Mid: Ischiorectal abscess, Crohn's, past excision of anterior rectal tumor, radiation injury, childbirth trauma, rectal/vaginal or cervical cancer.
- High: Crohn's, radiation injury, operative injury, diverticulitis, rectal/vaginal or cervical cancer
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Diagnosis:

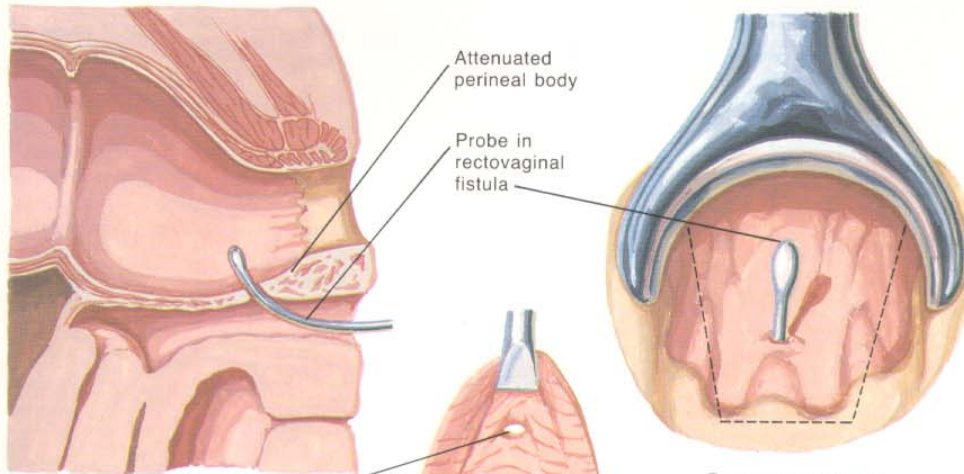
- Patients report passing gas through the vagina
- biddigital exam
- Can fill the vagina with water and with proctoscope inject air into the rectum.
- Methylene blue can be used in the same vein.
- In a study from the University of Minnesota, the incidence of coexistent fecal incontinence was 48% (*Dis Colon Rectum 1998;41:1141-6*)

Treatment:

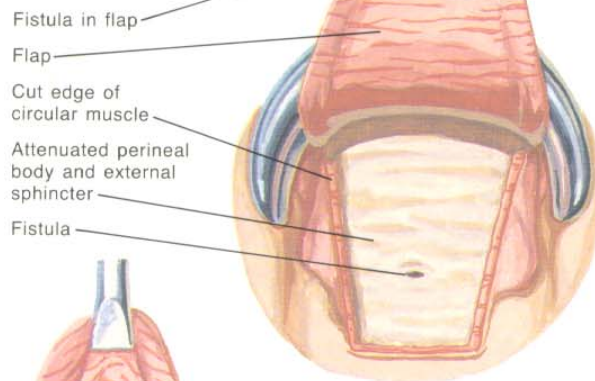
- *Transanal*:
 - Advancement flap: best with low-mid fistulas in patients with good sphincter tone. The flap should consist of mucosa, submucosa, and circular muscle, the distal portion of the flap, which includes the fistula site itself, is excised. Dissection of the fistula tract is carried down deep into the rectovaginal septum, the internal sphincter is mobilized from its lateral position and approximated over the vaginal closure. The flap is then advanced caudally and sutured over this muscle closure.

- Advancement flap and sphincteroplasty: up to 96% success. Without the sphincteroplasty, success varies from 44-95%. (*Current surgical therapy 1992.*)
- *Transvaginal:*
 - An incision is made in a circular fashion surrounding the site of the fistula on the posterior vaginal wall. The fistula tract is then excised down into the rectal vault, after which the vaginal mucosa is elevated off of the underlying rectovaginal septum. A series of concentric purse-string sutures are then placed transvaginally into the rectovaginal septum to imbricate the fistula opening into the rectal vault. The vaginal mucosa is then closed. Levatorplasty may be performed simultaneously with this approach.
- No good trials comparing Transanal and Transvaginal.
- *Transperineal:*
 - Transverse repair, sparing the sphincter- “no other muscle in the body is such a protector of the dignity of man, yet so ready to his relief. A muscle like this is worth protecting.”-*Bornemeier.*
 - Transverse incision made across perineal body, above the anal sphincter. Dissection b/w the anterior rectal wall and vagina is carried laterally well around the fistula. Transect the fistula tract. Re-approximate the vaginal mucosa longitudinally with two layers. Close the rectal wall defect transversely. Puborectalis muscle and perineal tissue are re-approximated in the midline.
 - Fistulotomy combined with perineoproctotomy:
 - The fistula tract is identified and the perineal bridge of skin, fat, sphincter muscle (if present), and rectal and vaginal walls is divided, thereby converting the fistula into a perineal cloaca. The fistula tract is then excised. The rectal and vaginal mucosal layers are then dissected away from the sphincter muscle and septum and repaired as separate layers. The rectal wall may then be imbricated to increase anal tone.
 - Should be reserved for those women who have associated sphincter defects or who have undergone previous failed attempts that may limit exposure for repeat transanal approach. -Success Rates are from 85-100% (*Dis Colon Rectum 1995;38:4-6, Surg Gynecol Obstet 1990;171:43-6*)
- *Transabdominal:* For High Fistulas: Resection and J-pouch.
- *Bilateral Gluteus Muscle Patching:*
 - An X-shaped skin incision was made on the perineum, and then the rectum was carefully divided from the vagina. Defects of both the rectum and the vagina were closed with vertical mattress sutures. The external sphincter muscle also was approximated. The gluteus muscle was identified through another skin incision to the buttock, and cut at the attachment to the femur. Bilateral gluteus muscles were approximated at the midline of the perineum so that the vagina was sufficiently separated from the rectum. (*Tech Coloproctol. 2003 Oct;7(3):198-202*)
 - Procedure performed in 4 patients in with intractable fistulas, all with good result.
- *Fibrin Sealent:* 14% success rate (*Dis Colon Rectum. 2003 Sep;46(9):1167-74*)

Rectovaginal Fistula Repair

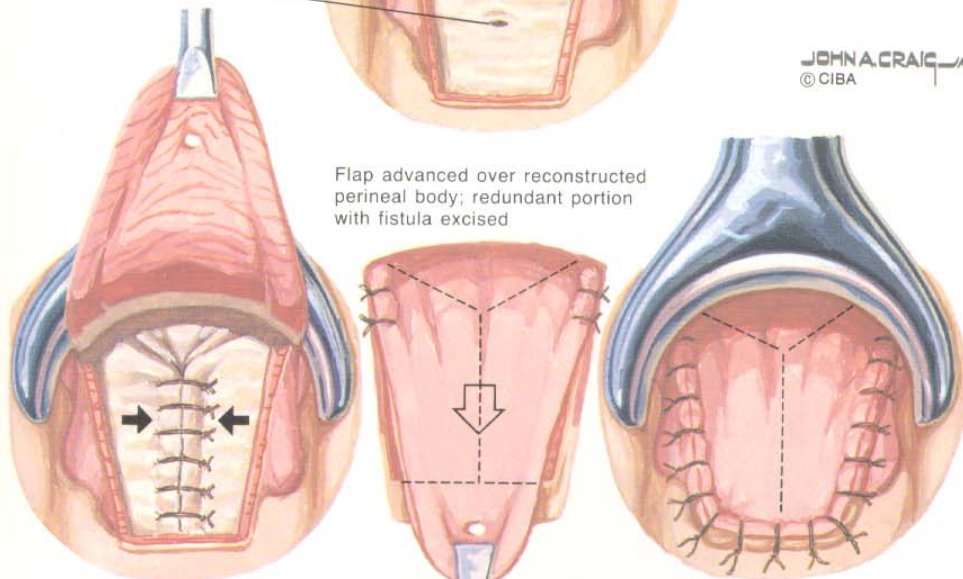


Rectovaginal fistula identified by probe; flap outlined



Advancement flap of rectal mucosa, submucosa, and circular muscle elevated from rectal wall

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Perineal body reconstructed by plication over fistula

Flap sutured in position with interrupted sutures

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