

RECTAL PROLAPSE - 2

Procidencia:

- circumferential, full thickness protrusion of rectal wall through anal orifice
- intussusception of rectum

Differential Diagnosis: prolapsed hemorrhoids

- radial folds vs. clefts

Categorized:

- occult (internal)
- mucosal (no muscularis layer)
- complete (external)

Epidemiology: extremes of age

- Pediatric:
 - diagnosed by age 3
 - 20% children with Cystic Fibrosis
 - equal gender
- Adult
 - peak after 5th decade
 - women 80-90%

Natural history:

- Internal to complete
- Solitary rectal ulcer (result of internal prolapse of anterior rectal wall, injury or ischemia)
- Outlet constipation with urgency, straining sensation of incomplete evacuation
- Incarceration, strangulation uncommon
- Persistent: sphincter destruction, incontinence, mucous discharge, rectal bleeding, pruritis ani

Associated:

- obstetric trauma
- not related to parity, nulliparit
- spina bifida
- pruritis ani
- Pelvic floor dysfunction: constipation, incontinence, anatomic defects, rectoceles, enteroceles, cystoceles, uterine/vaginal prolapse,
- deep cul-de-sac

Presentation:

- Anal discharge
- Rectal bleeding

Fecal incontinence:

- 28-88%, cause or effect
- pudendal neuropathy
- Muscle injury: sphincter
- Associated with duration of disease

Constipation:

- 15-65%, straining
- Anterior: solitary rectal ulcer,
- Posterior: loose sacral attachments,
- Colonic inertia

Etiologies:

- Colonic tumor
- Redundant sigmoid colon (unclear whether the redundancy is the result of constipation or cause of prolapse) □ Intussusception
- Lack of fixation of the rectum to the sacrum
- Diastasis of the levator muscles
- Neurologic diseases (cauda equina syndrome, spinal cord lesions) lead to denervation of the pelvic floor with attendant pelvic floor weakness that results in prolapse
- Schistosomiasis (in Egypt), Marfan syndrome and Ehlers-Danlos syndrome reported as unusual causes of rectal prolapse

Evaluation:

- PMHx: DM, meningomyelocele, spina bifida, spinal injury, cauda equina, lumbar disk disease, spinal cerebral tumors, MS, diabetic neuropathy
- PSHx: Obstetrical surgery, hysterectomy, pelvic support defect
- PE:
 - Perineal skin, anal sphincter defects/strength, rectocele, enterocele,
 - Standing after straining, pruritus ani, scars,
 - Cutaneous sensation, anocutaneous reflex
- Colonoscopy, BE: neoplasms, stenosis, ulcers, inflammatory lesions, lead point
- Colonic inertia: if fiber/fluids/stool softeners not therapeutic, transit study, defecogram, small bowel contrast

PERINEAL**1. Thiersch encirclement**

- encircle anus with silver wire loop, mesh or nonabsorbable suture
- local regional anesthesia
- suture tied snugly around index finger
- advantages: local anesthesia
- disadvantage: prolapse persists internally not fix anatomic abnormality failure rate up to 80%, severe constipation, fecal impaction, infection, erosion, tenesmus, lump, incomplete evacuation, wound infection, Strangulation risk with recurrent prolapse

2. Altmeier rectosigmoidectomy:

- 1889, Mikulicz
- regional or general anesthesia
- external full thickness prolapse
- prolapse as far as possible, submucosa epinephrine injection
- incision 1.5cm proximal to dentate line, carried full thickness
- posteriorly and laterally rectal vessels
- 15-30cm of sigmoid resected
- levatorplasty, 2-3 sutures through the levator ani and puborectalis
- hernia sac amputated, suture to ant sigmoid wall
- amputate prolapsed sigmoid, anastomosis interrupted absorbable suture.
- low complication, anastomosis, but incontinence exacerbated because resection reduces capacity to expand
- recurrence 2.8%-54%

3. Delorme procedure:

- shortening mucosal length, creating fibrosis in the plicated rectal muscle,
- regional anesthesia, submucosal injection of epinephrine
- mucosa 1-1.5cm above dentate line incised circumferentially
- dissected from underlying muscle, continue until not able to pull mucosa further, plicate rectal muscle vertically in 4 quadrants,
- Advantages: safe, 46-75% improved incontinence, no worsening of constipation
- recurrence 3%-38%

ABDOMINAL:

1. Ripstein 1952:

- **fix rectum to sacrum with mesh wrap, no resection**
- both absorbable and non-absorbable meshes achieved similar results.
- The mortality rate was 0% to 1% and the recurrence rates were 0% to 6% for both meshes.
- overall improvement in continence, (constipation)
- pelvic sepsis reported in 2% to 16% of patients with prosthetic rectopexy.
- Mortality rates 0% and 2.8%
- recurrence rates between 0% and 13%, recurrence rate in men was 3 times that in women (24% vs 8%).

2. Ivalon sponge wrap:

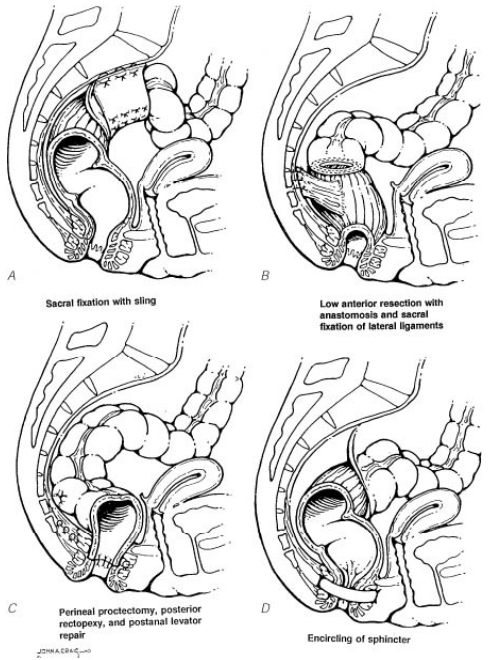
- Rectopexy with polyvinyl alcohol sponge posteriorly
- mobilize rectum posteriorly proximal to lateral rectal stalks:
- **sponge sutured to sacrum and wrapped around posterior and lateral**
- constipation high post op (48%), ? denervation lateral stalk, high infection rate → abandoned

3. Sigmoid resection:

- concept based on a dense area of fibrosis forms between the anastomotic suture line and the sacrum, securing the rectum to the sacrum,
- resection of the abundant rectosigmoid, which avoids torsion or volvulus, relief of constipation
- resection rectopexy; (**Frykman-Goldberg procedure**)
 - combines the advantages of mobilization of the rectum, sigmoid resection, and fixation of the rectum.
 - mortality rates 0% to 6.7% with recurrence rate of 0% to 5%.
 - overall reduction in constipation,
 - Continence was also improved in most patients.

Choice of operation:

- Patients without significant comorbidity should be offered abdominal resection & rectopexy → very low mortality rates (higher complications than perineal) And lowest recurrence rate also a greater chance for functional improvements
- Posterior mesh rectopexy with other types of meshes has reasonable complication rates and recurrence rates.
- Preservation of the ligaments seems to have the advantage over their division in terms of continence and constipation..
- **Laparoscopic surgery**: advantages of less pain, ?shorter hospital stay, early recovery, and early return to work as compared with laparotomy. the results are similar to those with the open procedures
- **Perineal procedures** are often useful for frail patients with extensive comorbidity , not fit for major abdominal surgery. Mortality rates are acceptable, higher recurrence rates → may need 2nd operation. Perineal rectosigmoidectomy is well suited for patients with incarcerated, strangulated, and gangrenous rectal prolapse, whereas abdominal rectopexy cannot be
- Delorme procedure is associated with even higher recurrence rates than is perineal rectosigmoidectomy. In addition to reducing the potential risk of injury to the pelvic nerves,
- a perineal approach may be preferable in young male patients.



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