Anorectal Disease

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Anatomy of the Rectum

- **Length:** 12 cm.
- **Diameter:** Upper part → same of sigmoid (4cm) but lower is dilated (rectal ampulla).
- **Beginning:** rectosigmoid junction (sacral promontory).
- **End:** 2.5 cm below and in front of the tip of coccyx.

Anatomy of rectum

	Male	Female
Anterior	Bladder Seminal vesicles Ureters Prostate Urethra	Pouch of douglas Uterus Cervix Posterior vaginal wall
Lateral	Lateral lig Middle rectal A. Obturator internus M Side wall of pelvis Levator ani M	Lateral lig Middle rectal A. Obturator internus M Side wall of pelvis Levator ani M
Posterior	Sacrum and coccyx Loose areolar tissue Facial condensation Superior rectal A Lymphatics	Sacrum and coccyx Loose areolar tissue Facial condensation Superior rectal A Lymphatics

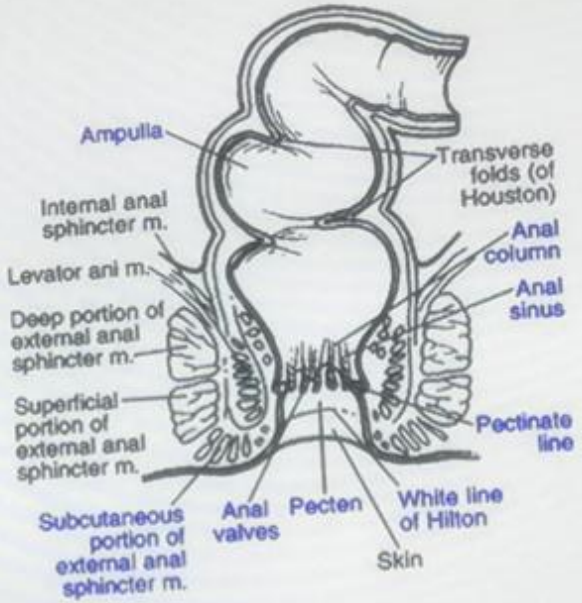
Anatomy of Anal Canal

Length: 4 cm

Extent: from anorectal junction to the anus.

Interior:

- Upper part:
  - Anal column
  - Anal valve
  - Anal sinus
  - Dentate line
- Middle part:
- Lower Part:

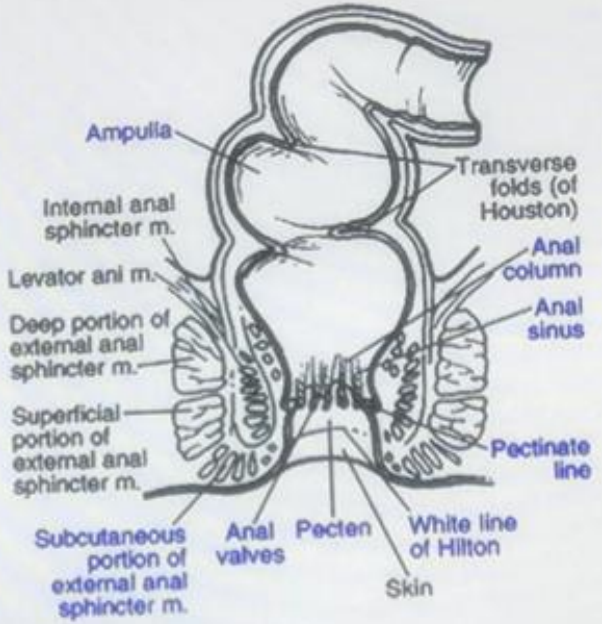


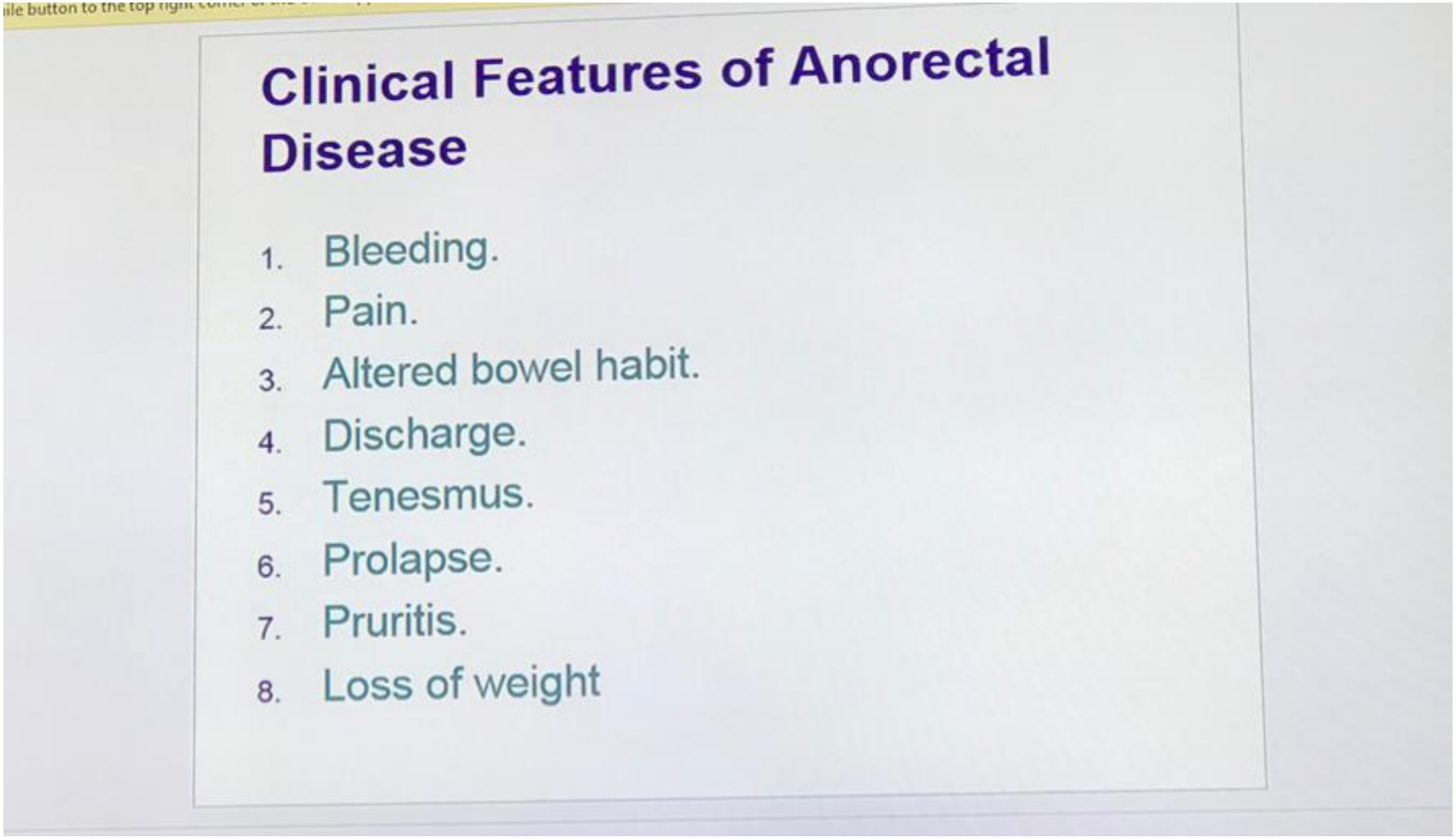
Anatomy of Anal Canal

Musculature:

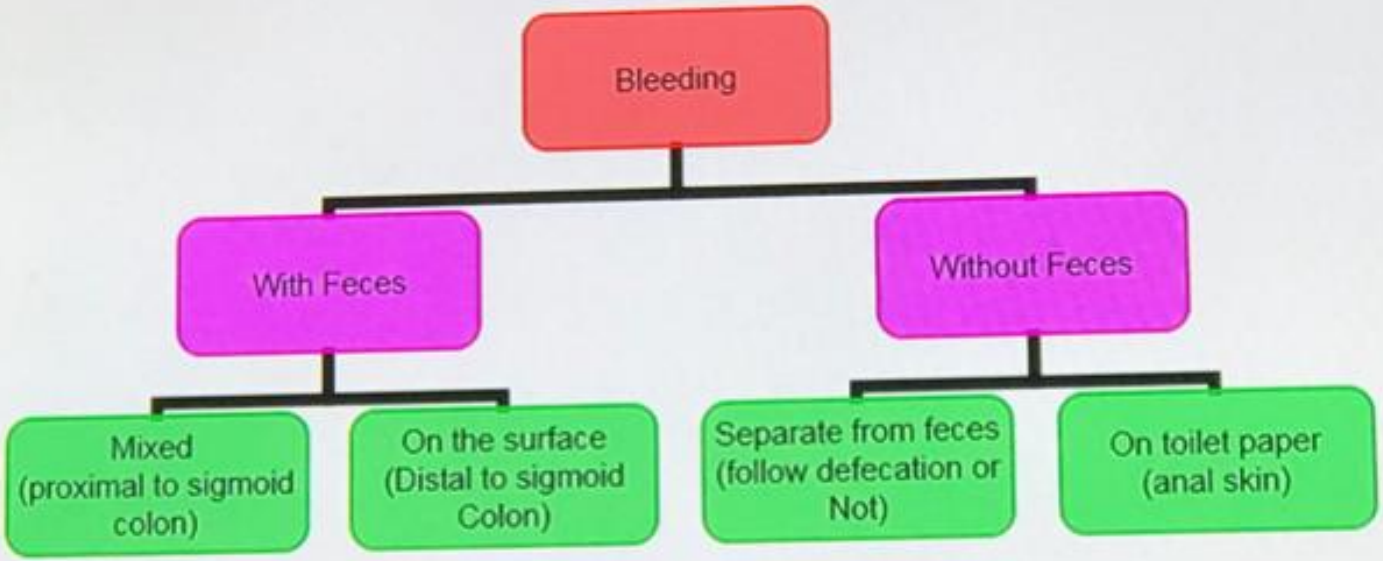
1. External anal sphincter
2. Internal anal sphincter

- Arterial supply:
  - Superior and inferior rectal arteries.
- Venous Drainage:
  - Rectal venous plexus
- Lymphatic Drainage.




Clinical Features of Anorectal Disease
1. Bleeding.
2. Pain.
3. Altered bowel habit.
4. Discharge.
5. Tenesmus.
6. Prolapse.
7. Pruritis.
8. Loss of weight

Bleeding



- The color of blood
  - Bright red → anal or rectum
  - Dark → proximal lesion in the large bowel or higher.

Clinical Features

- Pain
  - Painful or not?
    - Painless → Hemorrhoids and rectal Ca.
    - Painful → anal fissure, abscess
- Altered Bowel Habits
  - Spurious diarrhea

Clinical Features

Discharge

- Mucus or pus

- Tenesmus
  - " I feel I want to go but nothing happens"
- Prolapse
- Pruritis
  - Secondary to a rectal discharge

Investigations

Proctoscope

- Inspect (10-12 cm)
- Biopsy can be taken

Proctosigmoidoscope

- Lighted tube 2 cm in diameter.
- 20 to 25 cm long.
- Reaches 20 to 25 cm from the dentate line.
- 20 to 25 % of colorectal tumors.
- Safe and effective for screening low-risk adults under 40 years of age.
- An enema is sometimes used to prepare the patient before the examination.

Investigation

Sigmoidoscope

- 18 cm
- Inspect

Flexible sigmoidoscope

- A fiberoptic scope.
- Measures 60 cm in length.
- Reach the proximal left colon or even the splenic flexure.
- 50 % of colorectal cancers.
- Every 5 years beginning at age 50 is the current endoscopic screening method recommended for asymptomatic persons at average risk for colorectal carcinoma.

Hemorrhoids

- Definition
  - Internal
  - External
- Sites

1. Left lateral (3 o'clock).
2. Right posteriolateral (7 o'clock).
3. Right anterolateral (11 o'clock).

Haemorrhoids: clinical features

- ■ Haemorrhoids or piles are symptomatic anal cushions
- ■ They are more common when intra-abdominal pressure is raised, e.g.(in obesity, constipation and pregnancy)
- ■ Classically, they occur in the 3, 7 and 11 o'clock positions
- with the patient in the lithotomy position

Hemorrhoids

- Classification

1. 1st degree
2. 2nd degree.
3. 3rd degree.
4. 4th degree.

- How hemorrhoids causes bleeding?

Four degrees of haemorrhoids

- First degree – bleed only, no prolapse
- Second degree – prolapse but reduce spontaneously
- Third degree – prolapse and have to be manually reduced
- Fourth degree – permanently prolapsed

- **Complications of haemorrhoids**
- ■ Strangulation and thrombosis
- ■ Ulceration
- ■ Gangrene
- ■ Portal pyaemia
- ■ Fibrosis

- Treatment of haemorrhoids
- ■ Symptomatic – advice about defaecatory habits, stool
- softeners and bulking agents
- ■ Injection of sclerosant
- ■ Banding
- ■ Haemorrhoidectomy

Operation

The indications for haemorrhoidectomy include:

- third- and fourth-degree haemorrhoids;
- second-degree haemorrhoids that have not been cured by non-operative treatments;
- fibrosed haemorrhoids;
- intero-external haemorrhoids when the external haemorrhoid is well defined.

If there is any doubt about the diagnosis of haemorrhoids, examination under anaesthesia and, if indicated, biopsy are necessary.

Treatment of hemorrhoids

- 3rd degree
  - Hemorrhoidectomy

Complication of hemorrhoidectomy

- Acute urinary retention
- Secondary hemorrhage
- Anal stenosis

Thrombosed hemorrhoid

- Conservative (laxative, analgesic, ice packs)
- Operative manual dilatation of the anus and hemorrhoidectomy

Complications of haemorrhoidectomy

Early

- Pain
- Acute retention of urine
- Reactionary haemorrhage

Late

- Secondary haemorrhage
- Anal stricture
- Anal fissure
- Incontinence

Fissure-in-ano (anal fissure)

Definition:

- Acute & chronic
- Longitudinal split in the skin of the anal canal.
- Common sites:
  - Midline 6 and 12 o'clock.
- Rarely associated with crohns, HSV, HIV.

Fissure-in-ano

- Diagnosis
- Treatment
- Non- operative
  - Stool softeners and laxatives to relieve straining.
  - Improve hygiene.
  - Anesthetic suppositories may be helpful.
- Operative
  - Anal dilation.
  - Lateral internal sphencterotomy
  - Fissurectomy and midline sphencterotomy.

Proctitis

- Cause
  - Nonspecific
  - Ulcerative proctocolitis
  - Crohn's disease
  - Infection
    - Clostridium difficile
    - Bacillary dysentery
    - TB proctitis
    - Syphilis
    - Gonococcal

Proctitis

Nonspecific proctitis

- is an inflammatory condition affecting the mucosa and, to a lesser extent, the submucosa, confined to the terminal rectum and anal canal.
- It is the most common variety.

Aetiology.

- This is unknown.
- The most acceptable hypothesis: It is a limited form of ulcerative colitis (although actual ulceration is often not present).

Proctitis

Clinical features

- Middle-aged.
- Slight loss of blood in the motions.
- Diarrhoea
- On rectal examination, the mucosa feels warm and smooth. Often there is some blood on the examining finger.
- Proctoscopic and Sigmoidoscopic examination:
  - Inflamed mucous membrane of the rectum, but usually no ulceration. The mucosa above this level being quite normal.

Proctitis

Treatment

- Self-limiting.
- Sulphasalazine (Salazopyrin).
- Prednisolone retention enemas.
- Severe cases → oral steroids.
- Rarely → surgical treatment (last resort)

Anorectal Abscess

- Definition: Infection in one or more of anal spaces, usually is bacterial infection of blocked anal gland at dentate line.

- Organisms
  - Ecoli
  - Staph aureus.

Anorectal Abscess

- Sites

1. Perianal.
2. Ischiorectal.
3. Pelvirectal.
4. Intersphincteric.

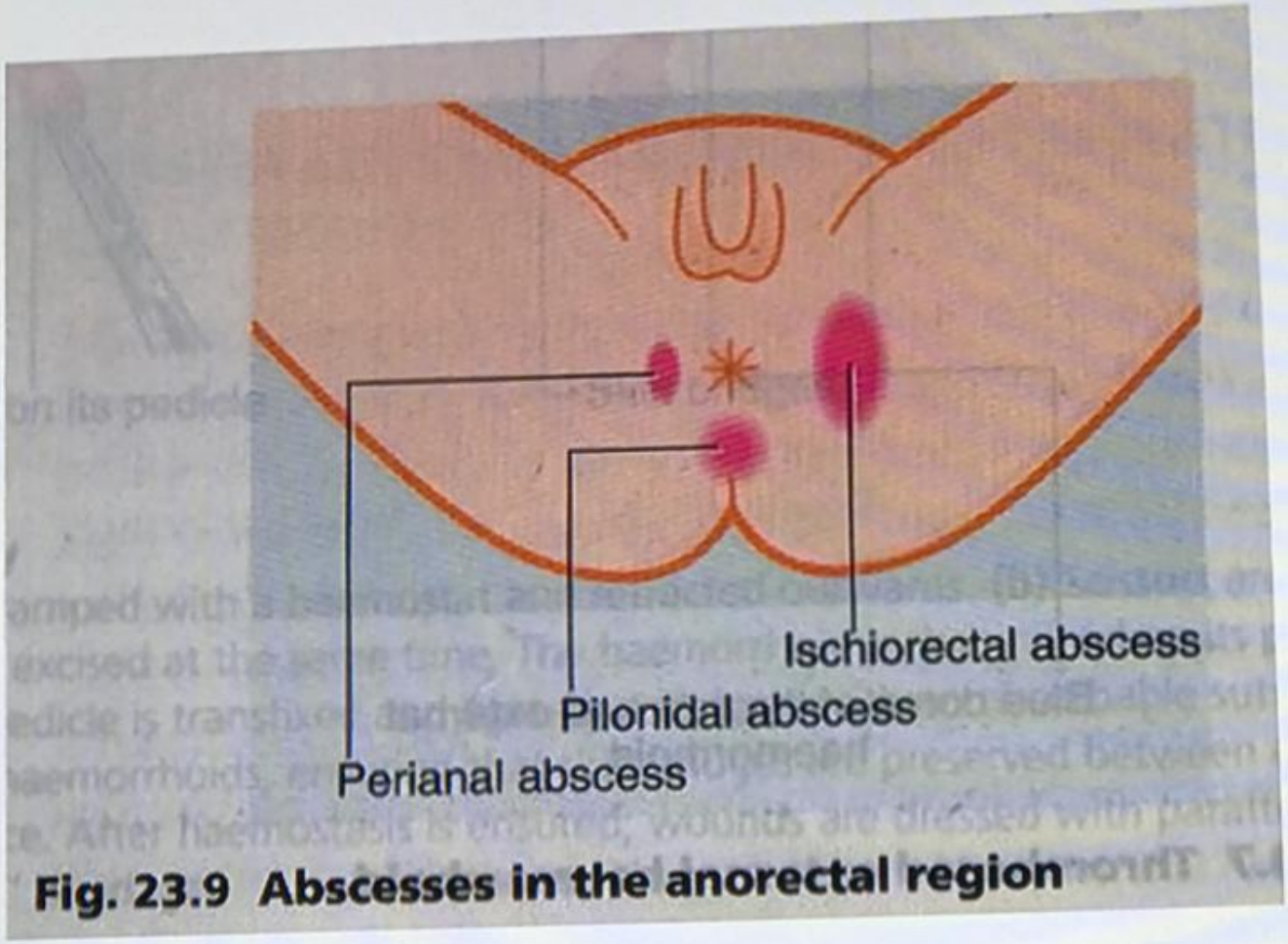


Fig. 23.9 Abscesses in the anorectal region

Anorectal Abscess

History

- Age, sex, symptoms

Examination:

- Position
- Tenderness
- Color/temp
- Shape, size, composition
- Lymph drainage
- Local tissue
- General Examination

Anorectal Abscess

Investigation

Treatment

- Incisional and drainage

- Antibiotics

Fistula-in-ano

- **Abnormal communication between any two epithelium-lined surfaces**
- **Parks classification:**

FISTULA IN ANO

- Etiology
  - Cryptoglandular sepsis(most common)
  - Trauma
  - Crohn's disease
  - Malignancy
  - Radiation
    tuberculosis,actinoymycosis

Anal Fistula

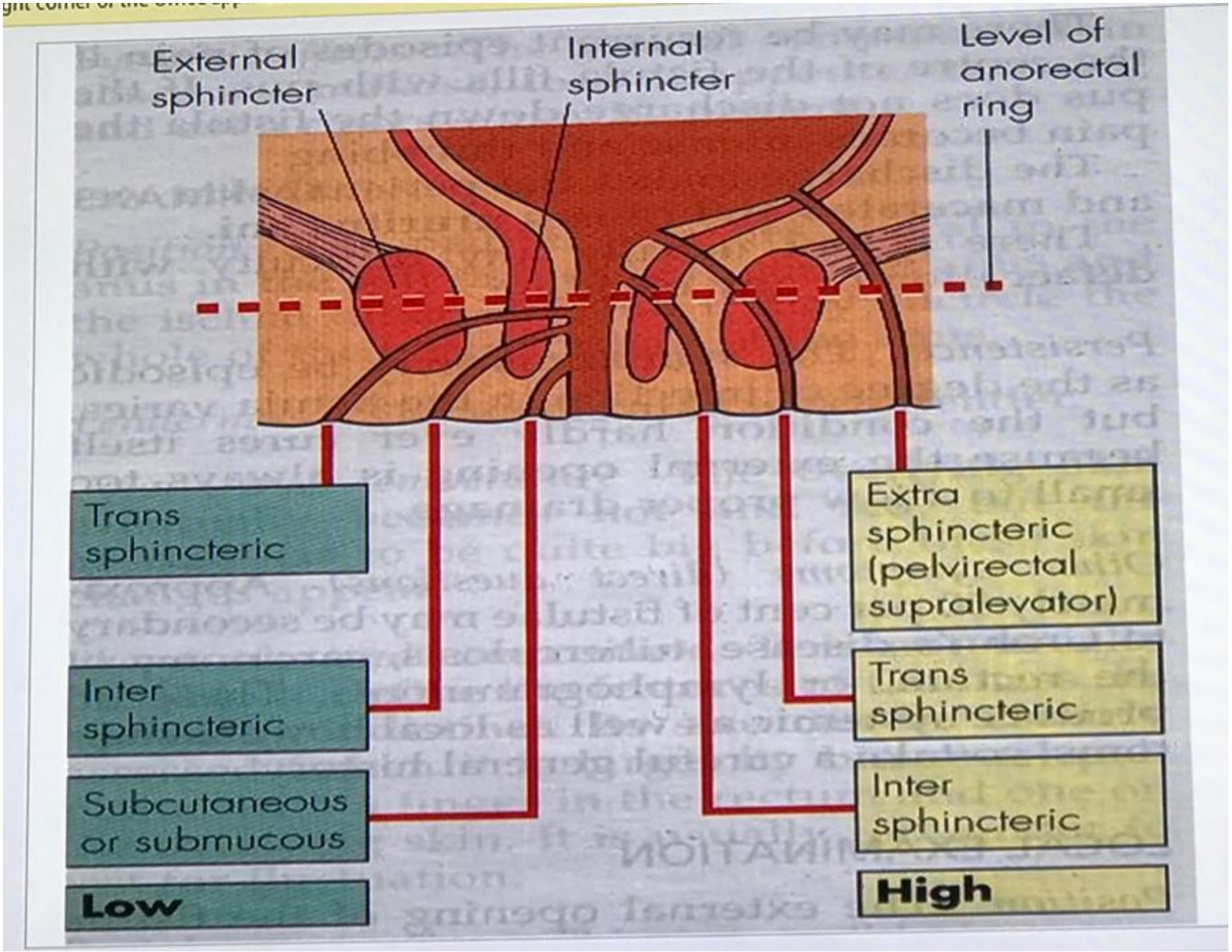
- 50% secondary to crohn's, TB, CA of rectum or lymphogranuloma.
- S/S
  - Watery or purulent discharge from the external opening of fistula
  - Recurrent episode of pain.
  - Pruritis.

CLASSIFICATIONS OF FISTULA IN ANO

1. Park's classification
2. High and low fistula in ano
3. Simple and complex fistula in ano

PARK'S CLASSIFICATION

1. Intersphincteric
2. Transsphincteric
3. Suprasphincteric
4. Extrasphincteric


External sphincter
Internal sphincter
Level of anorectal ring
Trans sphincteric
Inter sphincteric
Subcutaneous or submucous
Low
Extra sphincteric (pelvirectal supralevator)
Trans sphincteric
Inter sphincteric
High

SPECIAL INVESTIGATIONS

- Trans rectal ultrasound (TRUS)/ Endoanal ultrasound
- Fistulogram
- MRI

SURGICAL MANAGEMENT

- Fistulotomy
- Fistulectomy
- Setons

Rectal Prolapse

- Definition: Eversion of whole thickness of the lower part of rectum and anal canal.
- Types

1. Partial prolapse.
2. Complete prolapse.

- Cause
- Predisposing factors
- Differential diagnosis

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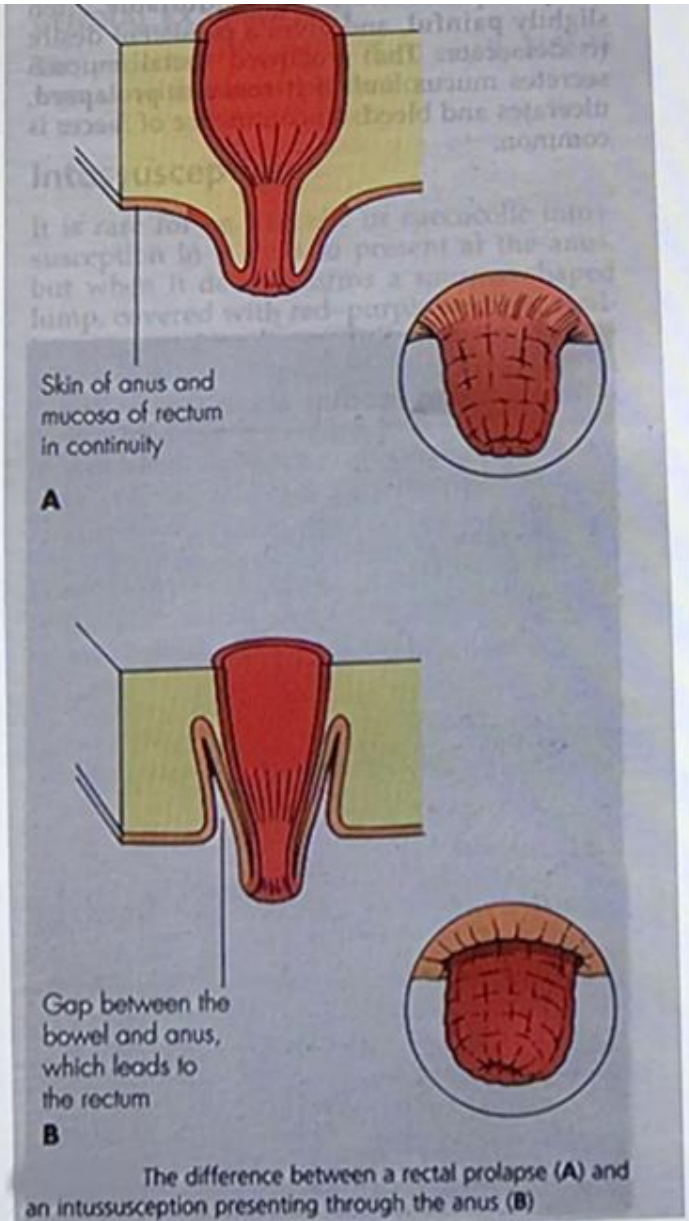

The difference between a rectal prolapse (**A**) and an intussusception presenting through the anus (**B**)

Rectal Prolapse

Treatment

- Partial
  - Infant
  - Adult

- Complete (Thiersch wire).

Pilonidal sinus

- Definition: Sinus which contain tuft of hairs, mainly in skin covering the sacrum and coccyx but can occur between fingers, in hair dressers, and the umbilicus.
- Etiology
- Symptoms
- Treatment
  - Acute abscess
  - Chronic abscess

Anal Neoplasm

Epidermoid carcinoma

- Most common
- Type of cell
- Prone to HPV infection.
- Treatment of choice.