Approach to Patient with Anal Pain or Bleeding Per Rectum

Contents of seminar

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  - Introduction
  - Causes
  - Approach
- **Anal pain**
  - Introduction
  - Causes
  - Approach
- **Investigations related to bleeding per rectum and anal pain**

At the end of the seminar
We will discuss this case

The case

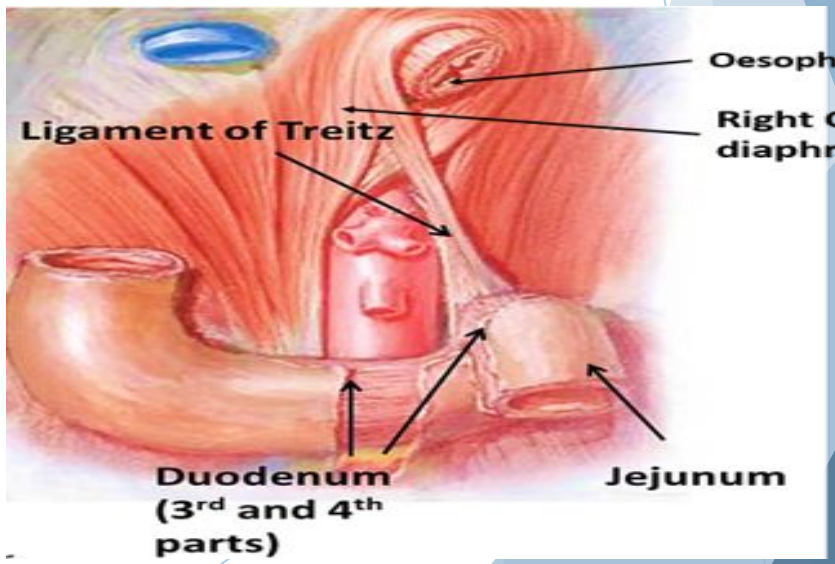
A 52-year-old man consulted in extreme perianal discomfort that he had experienced for 48 hours. He had no past history of similar problems and was otherwise asymptomatic. There was no abnormality on abdominal examination, while on examination of the perianal area there was a tense, dark blue, grape-sized swelling that was acutely tender to touch. Rectal examination was difficult to perform adequately because of pain but no other masses were palpable. What is the diagnosis, differential diagnosis and management?

Bleeding Per Rectum

- Introduction
- causes

Introduction
GI bleeding

- Lower GI bleeding:
- Bleeding distal to the ligament of Treitz .
  - This includes the 2ed and 3ed parts of the duodenum and the entire area of the jejunum , ileum , colon, rectum, and anus



Definitions

- **Haematochezia** :
- bright red blood per rectum
- Indicate lower GI bleeding,however could be present in massive Upper GI bleeding
- **Melena** :
- passage of black tarry stool
- Indicate bleeding from upper GI

Bleeding Per Rectum

- Classification **According to chronicity:**

Acute : defined as bleeding of less than **3** days associated with instability of vital signs , anemia , and/or blood transfusion.

Chronic : any passage of blood per rectum that results from intermittent or slow loss of blood

Most Common Causes Of Haematochezia

From colon :

- Diverticular disease
- Angiodysplasia
- ischemic Colitis
- Crohn's disease/UC
- Colon cancer /polyps

From rectum and anus :

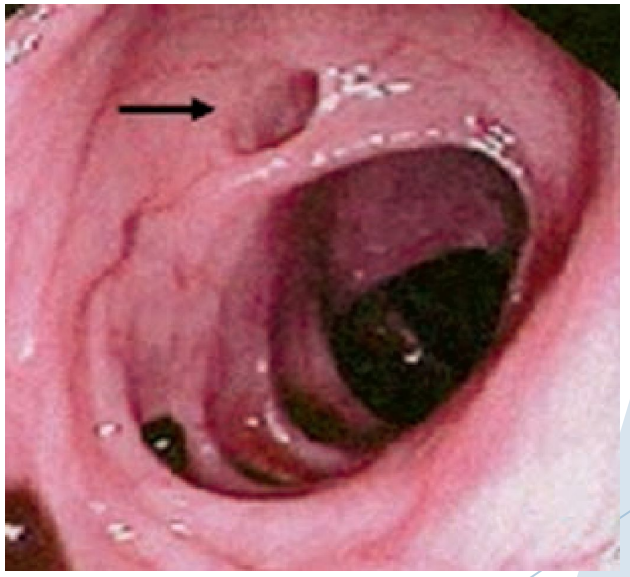
- Sometimes cause anal pain
- Haemorrhoids
- Anal fissures
- adenoma of the rectum
- Carcinoma of the rectum
- Fistula in ano
- Anorectal abscess

Diverticulosis

The most common cause of Massive LGIB.

A diverticulum is a blind pouch that communicates with the lumen of a bowel segment, caused by breakdown of muscular layer of GI tract

Most commonly arises in the sigmoid colon



Caused by :

straining to pass stool

Low fiber diet □ hard stool □ diverticulosis

Often asymptomatic

Complications:

Lower GI bleeding (heamatochezia)

diverticulitis

Diverticulosis

Symptoms:

1. Usually asymptomatic
2. In case of diverticulitis presented with Fever, Increased WBC ,LLQ(Lift sided appendicitis)
3. in diverticular bleeding (Haematochezia)

Diverticulosis

- **Diagnosis**

Usually incidental (asymptomatic)

1. Colonoscopy

Note: is contraindicated in case of diverticulitis due to risk of perforation

2. CT scan

- Treated only if cause bleeding or infection

Angiodysplasia

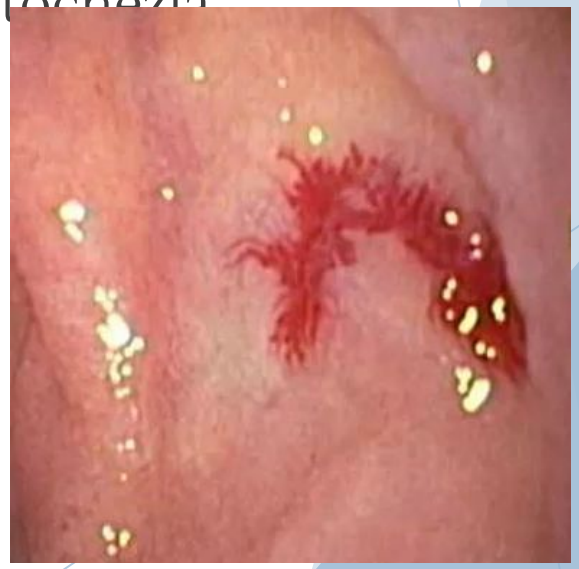
Aberrant blood vessels in the GI tract.

Lesions are often multiple, and common in the cecum or right sided colon.

They are usually asymptomatic , but their only clinical manifestation is bleeding so will be presenting with anemia, melena or hematochezia

Identified by colonoscopy

Treated only if bleeding



Ischemic colitis

Under perfusion of large intestine

Most common form of intestinal ischemia

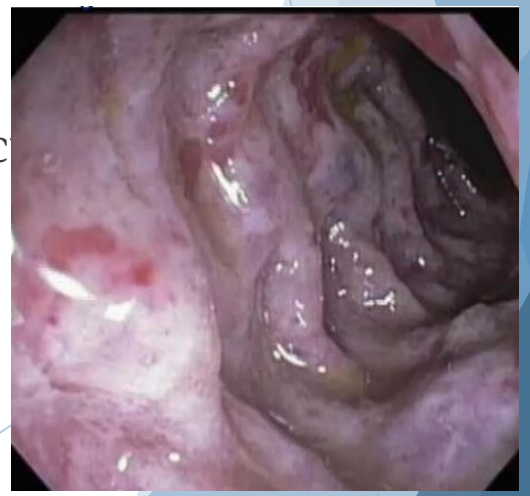
Lower abdominal pain/bloody diarrhea/hemotechezia

Most cases due to Hypotension: shock /hemorrhage

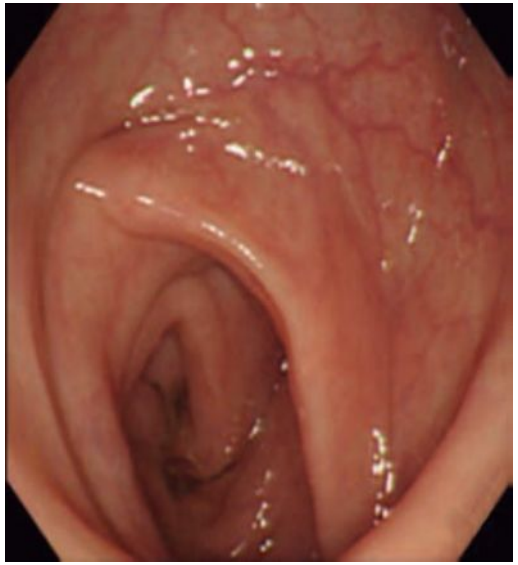
In watershed areas have limited collaterals : splenic flexure/rectosigmoid junction

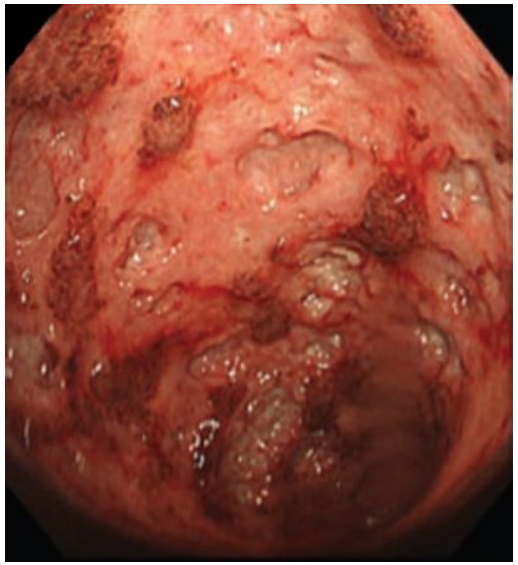
Diagnosis: usually clinical :hypotension/abdominal pain/elevated serum lac

Colonoscopy



Crohn's disease	Ulcerative colitis
Any portion of the GI tract, usually the terminal ileum and colon. **Skip** lesions, **rec**tal sparing.	Colitis = colon inflammation. Continuous colonic lesions, always with rectal involvement.
Transmural granulomatous inflammation **Cobblestone** mucosa/linear ulcers, fissures.	Mucosal and submucosal inflammation only. Loss of haustra "lead pipe" appearance on imaging.
Diarrhea that may or may not be bloody.	Bloody diarrhea
TT: Corticosteroids, azathioprine, antibiotics	Corticosteroids colectomy
Malabsorption/malnutrition, colorectal cancer (risk with pancolitis).	





Colorectal polyps

Benign tissue growth in bowel lumen .some are pre-cancerous .
The rectum and sigmoid colon, are the most frequent site of polyps.

Symptoms:

Asymptomatic /large polyps may cause bleeding
(usually not visible in the stool "occult" /basis for screening by fecal occult blood testing)

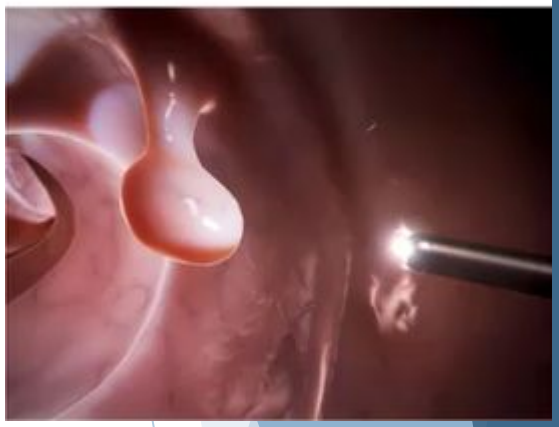
Diagnosis :

1. Colonoscopy
2. Digital rectal examinatioon

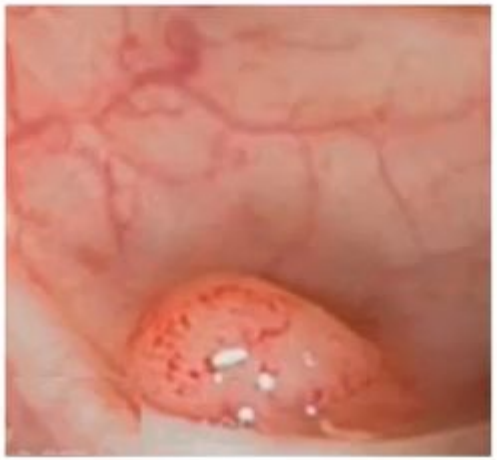
Management :

Endoscopic resection (removal can prevent colon cancer)
Send biopsy to check for cancer

Pedunculated Polyp



Sessile Polyp



Colorectal cancer

Risk factors : Adenomatous and serrated polyps, familial cancer syndromes, IBD, tobacco use, diet of processed meat with low fiber.

Colon cancer :

3ed most common cancer

Most common after age of 50 years

mostly not symptomatic until attain large size and detected by screening

Right-sided (Proximal/Ascending)	Left-sided (Distal/Descending)
Iron-deficiency anemia Weight loss	Hematochezia Blood-streaked stool Change in stool "caliber"

Note: Iron deficiency anemia in males (especially > 50 years old) and postmenopausal females raises suspicion

diagnosis:

1. Colonoscopy

(Screening: Usually recommended at age 50 then every ten years /Increased screening in high risk group or after polyps found)

2. Regular Digital rectal examination (FOBT)

Red Flags Of Colorectal Cancer

- **persistent change in bowel habits**, including diarrhea or constipation
- change in the consistency of stool.
- Rectal bleeding or blood in stool.
- Persistent abdominal discomfort, such as cramps, gas or pain. A feeling that bowel doesn't empty completely.
- Weight loss and loss of appetites

Approach to acute lower gastrointestinal bleeding

In patients suspected of having acute lower GI bleeding, the approach to diagnosis and management includes

- General management, including obtaining adequate intravenous access, triaging the patient to the appropriate level of care, and providing supportive measures such as supplemental oxygen
- Resuscitation, which should occur in parallel with the diagnostic evaluation
- Exclusion of acute upper GI bleeding with upper endoscopy if indicated (eg, in a patient with massive hematochezia and signs of hemodynamic compromise)
- Evaluation for a lower GI source of the bleeding, typically with colonoscopy

General management :

- Two large bore (16 gauge) IV
- IV fluid
- Blood transfusion
- Platelet transfusion if platelet <50k
- FFP or prothrombin complex for coagulopathy

Initial evaluation — The initial evaluation includes **a history, physical examination, laboratory tests**, and in some cases**, upper endoscopy**.

The goal of the evaluation is to assess the severity of the bleeding, assess whether the bleeding may be coming from the upper GI tract, and determine if there are conditions present that may affect subsequent management

History

1. Patient profile

2. History of presenting illness

We should ask specific questions about bleeding such as duration, frequency, timing, how it was first noticed, relation to defecation, character, colour, pain, previous similar episodes, clots & amount /prior episodes of GI bleeding,

3. Previous Medical History

Previous perianal disease/Inflammatory bowel disease/Peptic ulcer disease

/Coagulopathy

4. Drug History

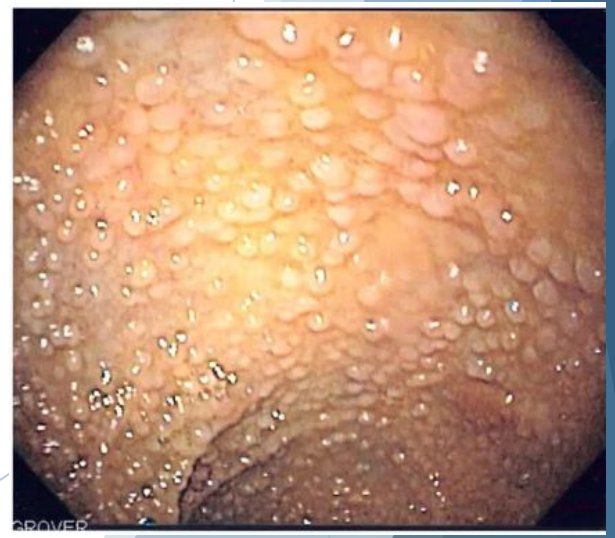
Laxative Agents/Anticoagulant Drugs/NSAIDs/Iron suplementation

5. Family History

History of malignancy/Familial Adenomatous Polyposis (FAP)

6. Social History

Low Fibre Diet/Smoking



Vital signs:

Temperature

Pulse rate

increased if the patient is hypovolemic

Respiratory rate

Blood pressure

may fall if the patient is hypovolemic

Physical examination:

The physical examination should include an assessment of hemodynamic stability as well as examination of the patient's stool to confirm the presence of hematochezia or melena

The presence of abdominal pain suggests the presence of an inflammatory bleeding source such as ischemic or infectious colitis or a perforation (eg, a perforated peptic ulcer in a patient with severe upper GI bleeding).

Laboratory tests:

- CBC
- Platelet
- PT /PTT/INR
- Type and screen

Consider an upper GI bleeding source —

The primary consideration in the differential diagnosis of hematochezia is upper GI bleeding since 10 to 15 percent of patients with severe hematochezia will have an upper GI

If the index of suspicion for an upper GI source is high, an upper endoscopy should be performed once the patient is appropriately resuscitated

Once an upper gastrointestinal (GI) bleeding source is excluded, **colonoscopy** is the initial examination of choice for the diagnosis and treatment of acute lower GI bleeding

- **The treatment of lower gastrointestinal (GI) bleeding** depends on the source of the bleeding. In many cases, the bleeding can be controlled with therapies applied at the time of colonoscopy or angiography. Rarely, patients with exsanguinating lower GI bleeding will need immediate surgery.

Anal pain

- Introduction
- Causes

Introduction

- Pain from the anal canal is felt principally on defaecation, and is often protracted, cramp-like and distressing. There may be a background ache. Excessive stretching of the anal canal may cause a sharp, splitting pain, sometimes described as if something is tearing. This is true if the patient has a fissure!

- Uncomplicated haemorrhoids and rectal cancer are not usually painful, while fissures, abscesses and perianal haematomas always are.

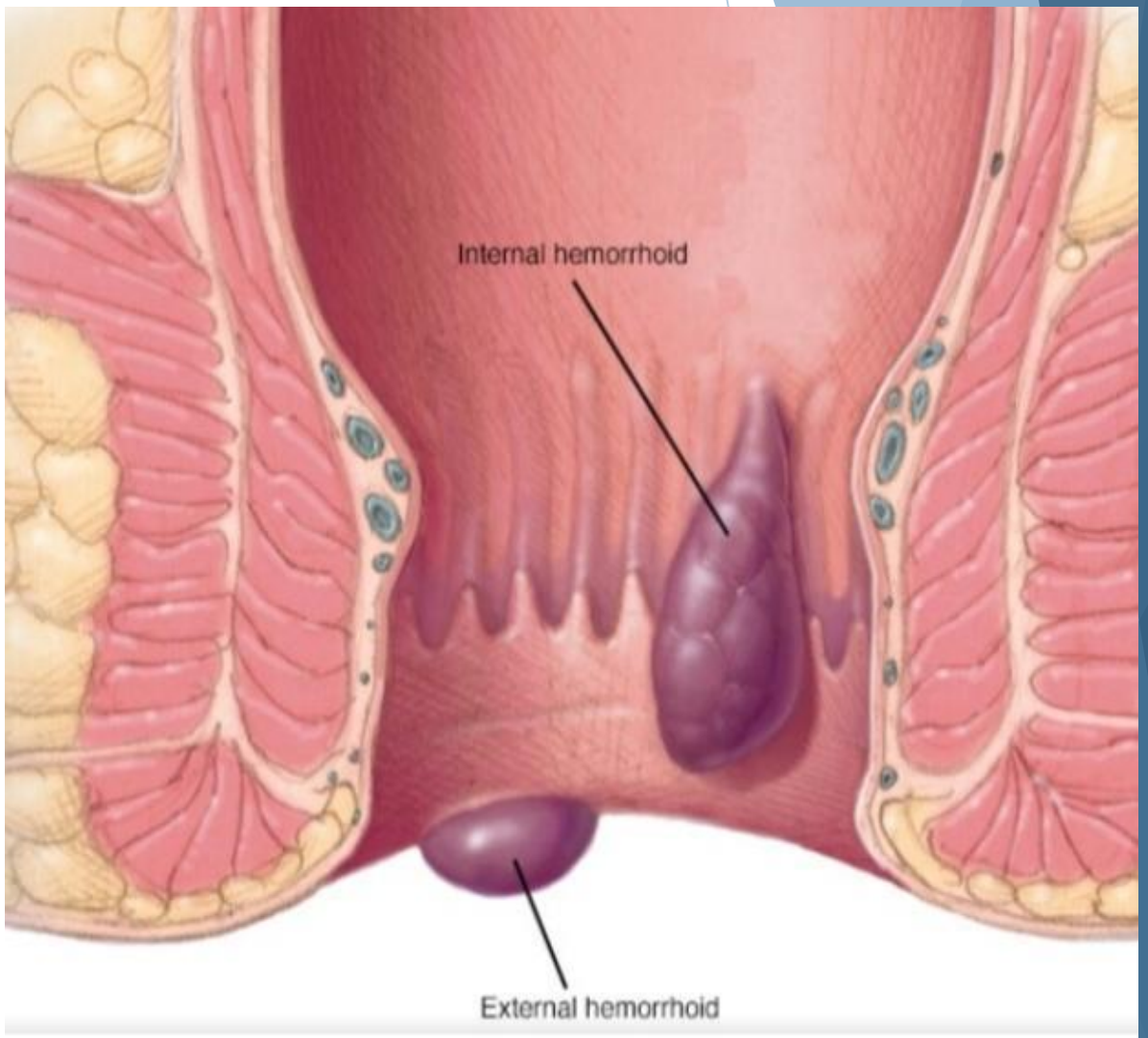
- **Rectal pain sometime is accompanied by other symptoms like** :
  - itching
  - stinging
  - discharge
  - bleeding

- **Most common causes :**
  - Anal abscess
  - Anal fistula
  - Anal fissure
  - Haemorrhoid

Hemorrhoids

Definition

Engorgemrnt of venous plexuses of rectum, anus or both with protrusion of the mucosa, anal margin or both.



Types of haemorrhoids

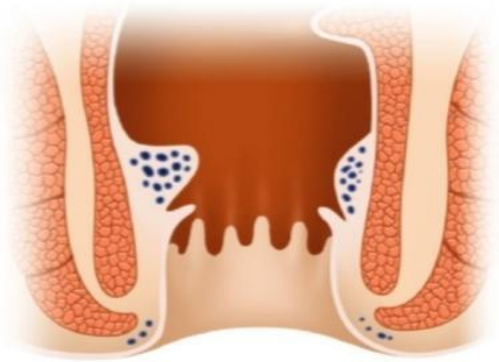
Internal hemorrhoids : arise above dentate line Lack sensory innervation (thus painless) Covered by Anal Mucosa Bright red or purple in color Drains into Superior rectal veins via the portal system

External Hemorrhoids: arise below the Dentate line , Supplied by cutaneous nerves that supply perianal area (thus painful), Drain into inferior Rectal Veins

Thrombosed hemorrhoids occure If blood pools in an external hemorrhoid and forms a clot.

Internal Haemorrhoids: Grading

- Internal haemorrhoids are classified by the degree of tissue prolapse into the canal
- **Grade 1:** confined to the anal canal with minimal or asymptomatic bleeding but do not prolapse.
- **Grade 2:** they prolapse on defecating or straining then reduce spontaneously.
- **Grade 3:** prolapse with or without straining and require manual reduction.
- **Grade 4:** chronically prolapsed and if reducible fall out again. Others fall out of the anus and are irreducible (strangulated): surgical emergency



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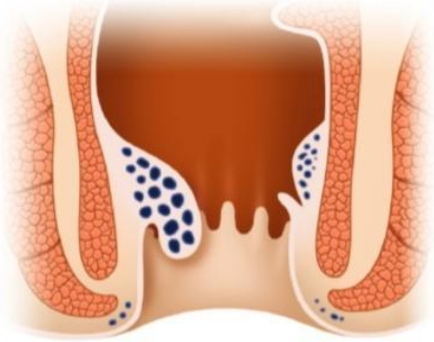

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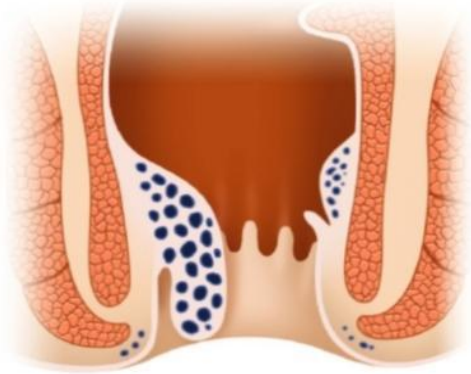

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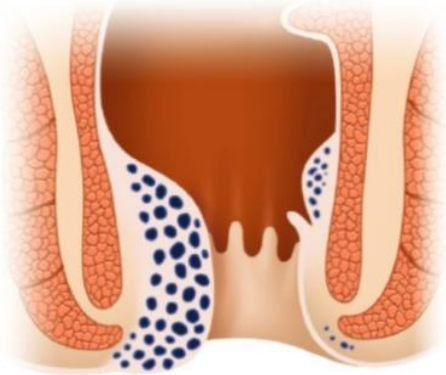

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Hemorrhoids symptoms :

External hemorrhoids : itching, Pain, anal mass, bleeding

Internal Hemorrhoids: Internal hemorrhoids lie inside the rectum. You usually can't see or feel them, and they rarely cause discomfort. But straining or irritation when passing stool can cause: Painless bleeding during bowel movements and Prolapse or protruding hemorrhoid resulting in pain and irritation.

Thrombosed Hemorrhoids

- If blood pools in an external hemorrhoid and forms a clot (thrombus), it can result in:

- Severe pain
- Swelling
- Inflammation
- A hard lump near your anus

Investigations

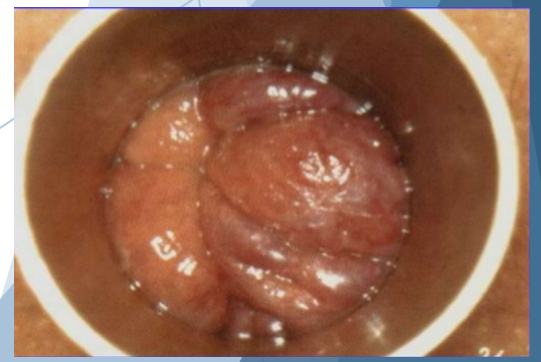
A visual examination of your anus may be enough to diagnose hemorrhoids

- **Per rectal examination:**

- To rule out carcinoma of the rectum or other causes
- Hemorrhoids cannot be felt unless thrombosed or fibrosed

- **Proctoscopy**: Piles prolapse into lumen of proctoscope as cherry red masses
- **Flexible sigmoidoscopy and colonoscopy**: To rule out proximal cancer
- **Barium Enema**: indicated when sigmoidoscopy and proctoscopy can't explain the symptoms.
- **CBC**: anemia, rarely happens in longstanding piles

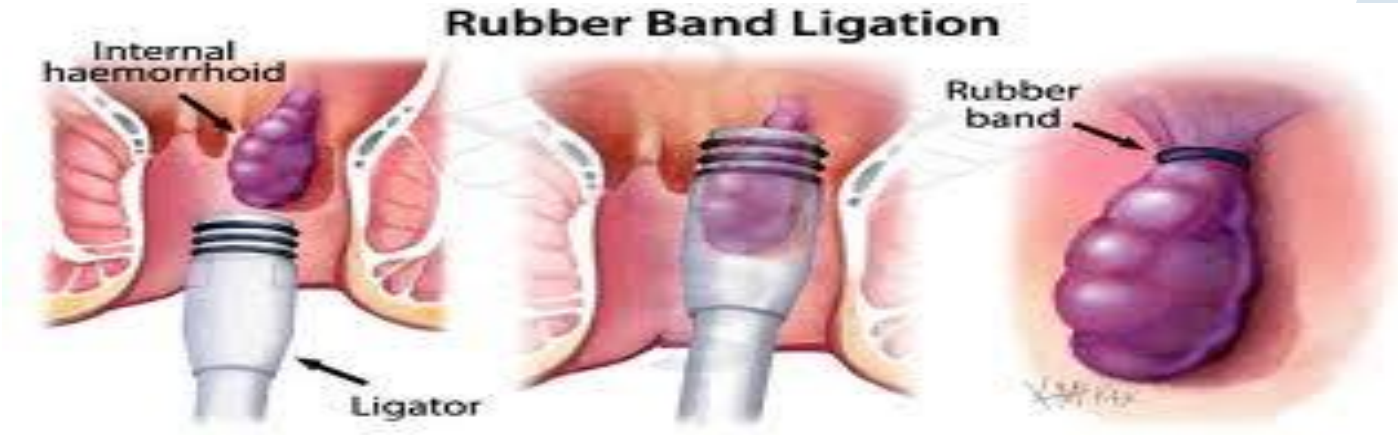
Internal Haemorrhoid: seen using proctoscopy



Internal Haemorrhoid: seen using proctoscopy

Treatment

- Laxatives
- high fibre diet, anal hygiene, topical steroid, sits baths
- Rubber band ligation.
- Surgical resection for large refractory haemorrhoid, infrared coagulation ,harmonic scalpe



Anal fissure

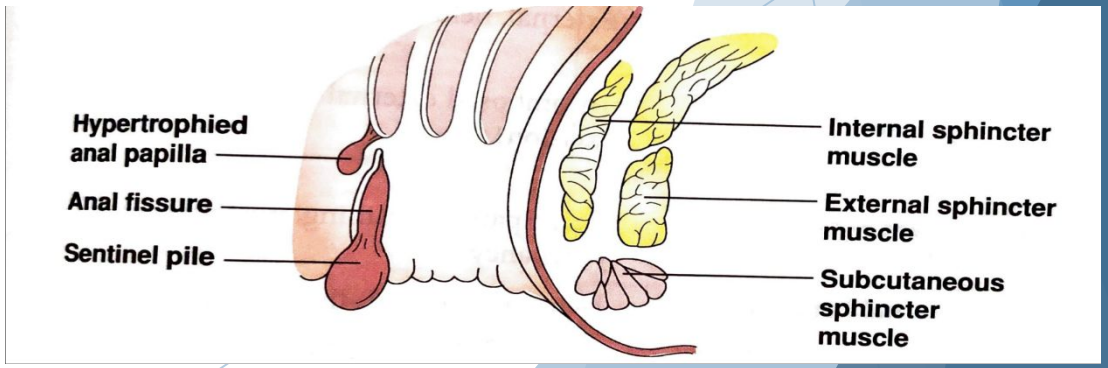
It is a tear in the anal epithelium, most common in the posterior midline of anus.

There are two types:

Acute: it is a deep tear in the anal canal with surrounding oedema and inflammatory induration. It is always associated with spasm of the anal sphincters.

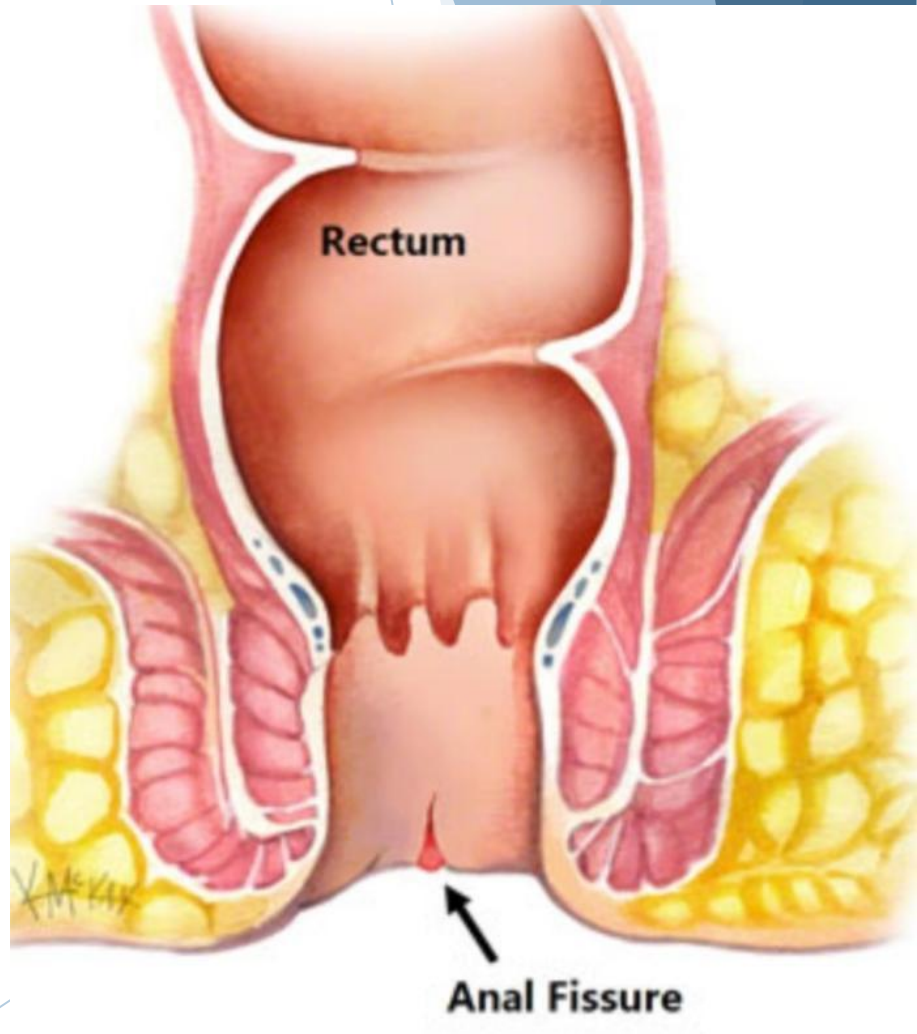
Bright streak of blood with the passage of stool and pain after defecation are the characteristic feature

Chronic: When acute fissure fails to heal, it will gradually develop into a deep undermined ulcer with continuing infection and oedema. This ulcer stops above at the pectinate line. Below, there is hypertrophied papilla and skin tag known as 'sentinel pile'.



Causes of anal fissure

1. Hard stools passage (constipation).
2. Hyperactive sphincter.
3. Disease process (e.g, crohn's disease).



Anal fissure, symptoms :

- **Pain**: fissures are the commonest cause of pain in the anal verge both acute and chronic fissures are very painful it begins at defecation and is described as tearing it persists for minutes to hours after defecation it is throbbing or aching in nature
- **Bleeding**: acute fissures may streak the stool with blood and stain the toilet paper Chronic fissures bleed less and may produce little blood stain of the toilet paper if any.
- A small skin tag called **sentinel tag or sentinel pile** may form at the lower end of a chronic fissure. This tag may be felt by the patient.
- **Constipation**
- Small amounts of **mucous leak** on the peri-anal skin
- **Pruritis**
- **Hypertrophic papilla.**

- **Clinical examination**
  - **Inspiction :**
    - Superficial or deep laceration in anal canal
    - chronic fissures may present with fibrotic and infective changes:
    - Wide, raised edges

      Skin tags (sentinel pile) at the fissure's distal end

      Hypertrophied anal papillae at the fissure's proximal end

- **We don't perform digital rectal examination to patient with anal fissure because it very painful. The diagnosis by inspection**

Treatment :

- 90% of anal fissures heal with medical treatment alone.
- Sitz bath
- Stool softener
- High fiber diet
- Excellent anal hygiene
- Topical nifedipine
- Botox.
- In case of Chronic fissure refractory to conservative treatment, it may indicate surgery.

Anorectal abscess

- **What is it?**
  Abscess formation around the anus/rectum .

- **What are the signs/ symptoms?**
  Rectal pain, drainage of pus, fever, perianal mass

- **How is the diagnosis made?**
  - Physical examination
  - digital exam reveals perianal rectal submucosal mass

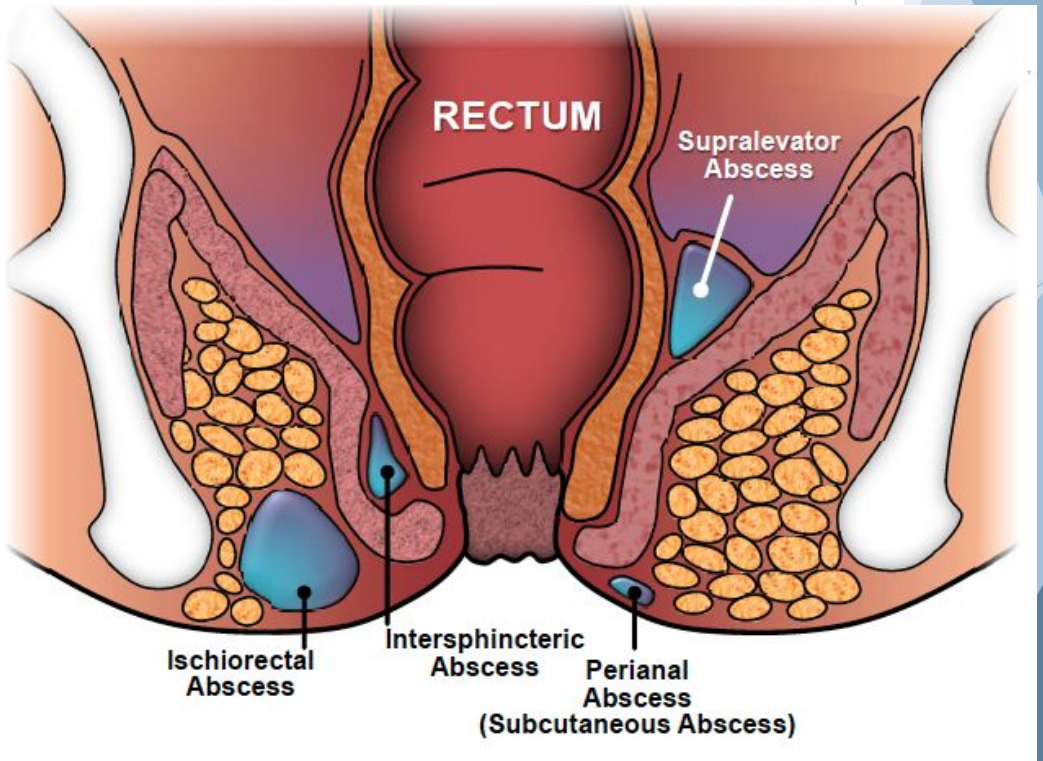
Anorectal abscess

- **What is the cause?**

Most common due to infection of anal gland in the crypts at the dentate line . Less common due to inflammatory bowl disease.

- **Classification:**

-Perianal
-intersphincteric
-supralavator
-ischiorectal .



Anorectal abscess

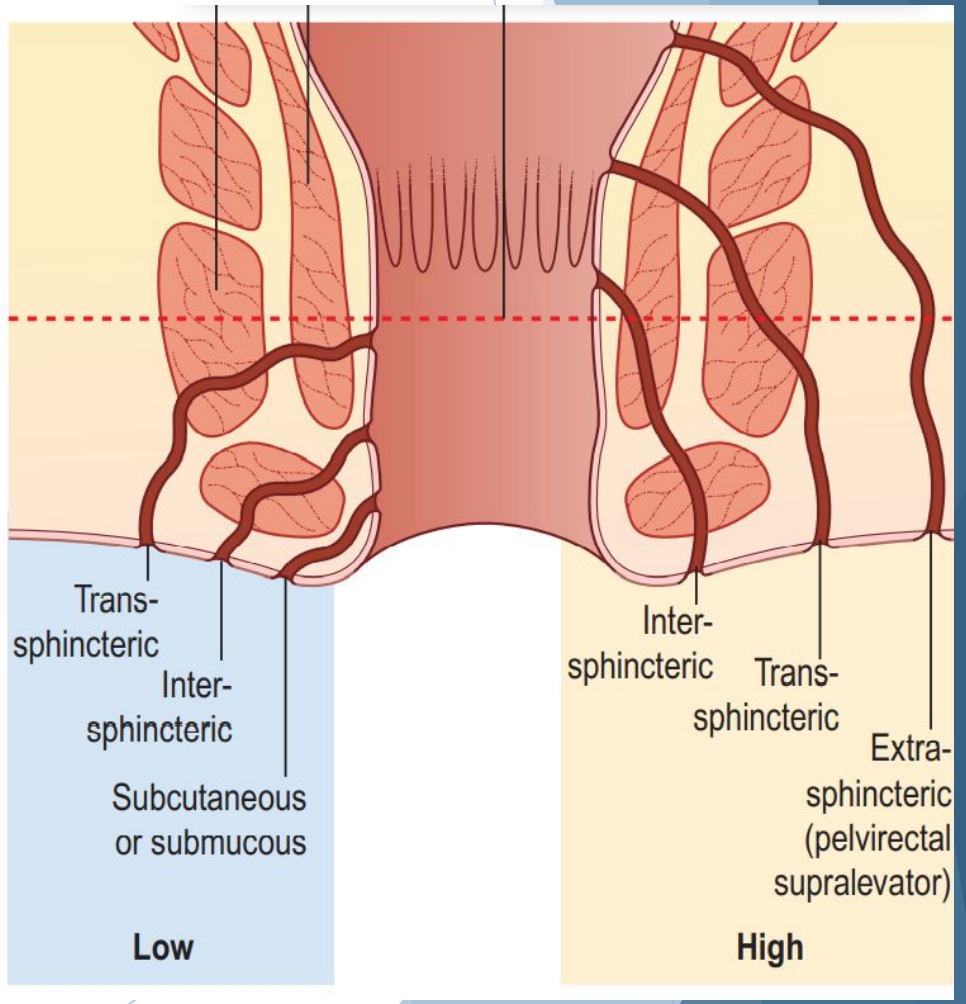
What is the treatment?

As with all abscesses drainage (internal sphincterotomy for intersphincteric abscess) , sitz bath, anal hygiene, stool softeners
What is the indication for postoperative IV antibiotics for drainage? Cellulitis, immunosuppression, diabetes, heart valve abnormality
What percentage of patients develops a fistula in ano during the 6 months after surgery? 50%

Anal fistula : definition

- Anal Fistula is defined as abnormal tract extending from skin of perianal region to the anal canal cavity or rectum.
- It arises most commonly from neglected perianal abscess

Less common from Crohn's disease ,trauma ,cancer .



Anal fistula : Clinical picture

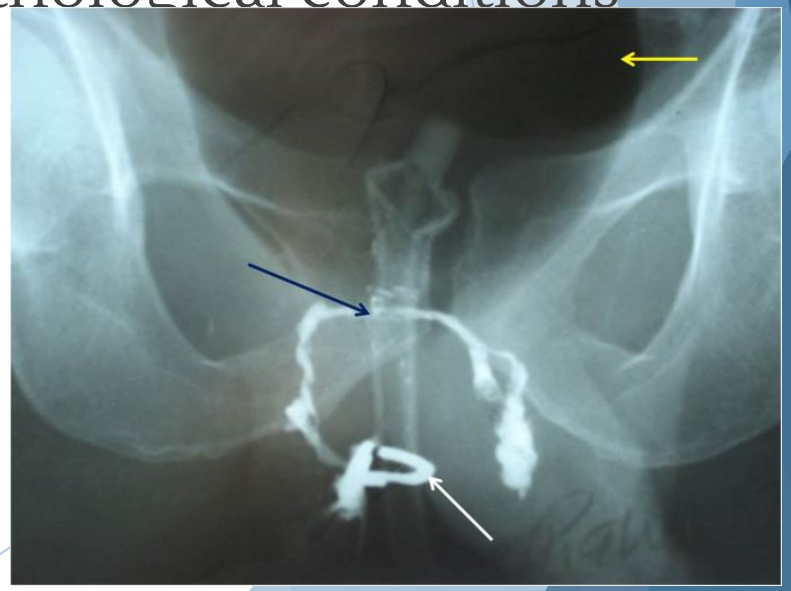
- History of previous perianal abscess (pus discharge)
- pruritis ani
- Pain with defecation (in case of abscess build-up)
- Occasional bleeding
- Tender indurated tract can be noticed (DRE)

Anal fistula : Investigations

- Inspection around the anal if the is opening .
- Most fistulae require no investigation other than a formal examination under anaesthesia (EUA)
- Proctoscopy & colonoscopy to exclude other pathological conditions

Like Crohn's disease

- Fistulogram: to see the track x-ray procedure



Invasive examinations are painful and can only be tolerated by the patient while under anesthesia or with adequate pain relief.

Anal fistula : Management

- Depend in the patient stability and the level of the fistula .
- First decompression of undrained abssess
- Fistulotomy (most effective): involves cutting along the whole length of the fistula to open it up so that it heals as a flat scar.
- Cutting Seton Technique
- Fibrin glue
- Collagen plug
- Ligation of the intersphincteric fistula tract (LIFT)
- Advancement flaps

Approach to patient with anal pain

1.History : what to ask patient with anal pain?

- **When did the pain start? Was there initiating event?**

During defecation : (acute anal fissure)
Pain start gradually, over several hours: (thrombosed external Haemorrhoid, anal abscess)

- **What is the character of the pain?**

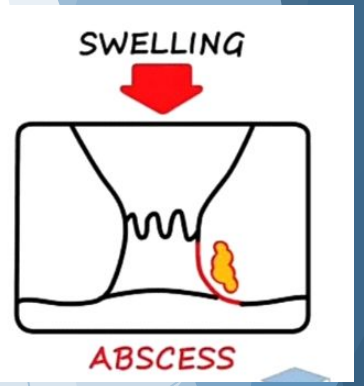
Sharp knife like pain with bowel movement: (anal fissure)
Dull constant pain, not associated with bowel movement: (Haemorrhoid, anal fistula)

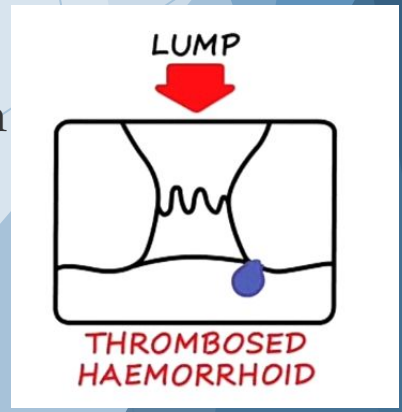
- **Is there tender lump or swelling associated with the pain?**

Large lump: (Haemorrhoid)
Tender swelling: (anorectal abscess)

- **If there previous GI problems.**

Almost always cause of problem around anus can be diagnosed by inspection.
You can perform A digital rectal examination, put usually doesn't provide s Useful information



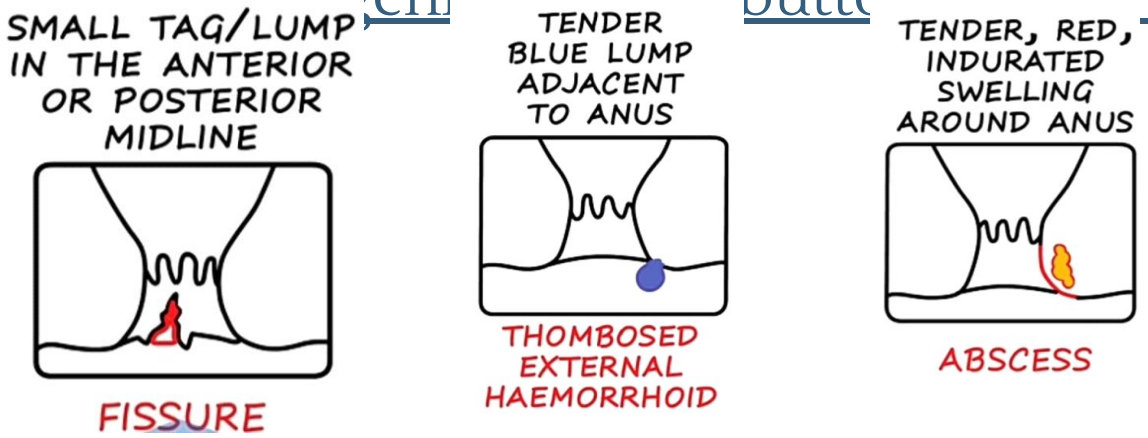


2. Examination

During inspection of peri anal region we look for :

- Tender blue lump around anus: (thrombosed external Haemorrhoid)
- Tender red, indurated swelling around anus: (anorectal abscess)
- Small tag, lump in the anterior or posterior of midline: (anal fissure)

*you s[illegible]eni[illegible]butt[illegible]vert the anus to see the fissure



3. Investigations

4. Treatments:

Relieve the pain and treat underlying conditions (anal fissure, anal fistula, Haemorrhoid..)

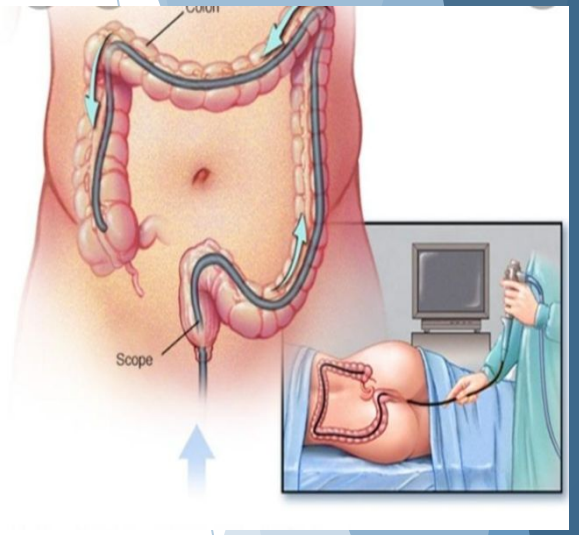
Investigation related to bleeding per rectum and anal pain

- Colonoscopy
- Sigmoidoscopy
- Barium enema
- CT scan
- Ultrasound
- proctoscopy
- Rectal examination

1. Colonoscopy

Procedure that allows healthcare providers to see inside your large intestine ,it is done with flexible camera called scope.

Purpose :check out bleeding . Polyps and cancers



- Advantages of colonoscopy compared with other tests for lower GI bleeding include its potential to precisely localize the site of the bleeding regardless of the etiology or rate of bleeding, the ability to collect pathologic specimens, and the potential for therapeutic intervention.
- Disadvantages of colonoscopy include the need for bowel preparation, poor visualization in an unprepared or poorly prepared colon, and the risks of sedation in an acutely bleeding patient.

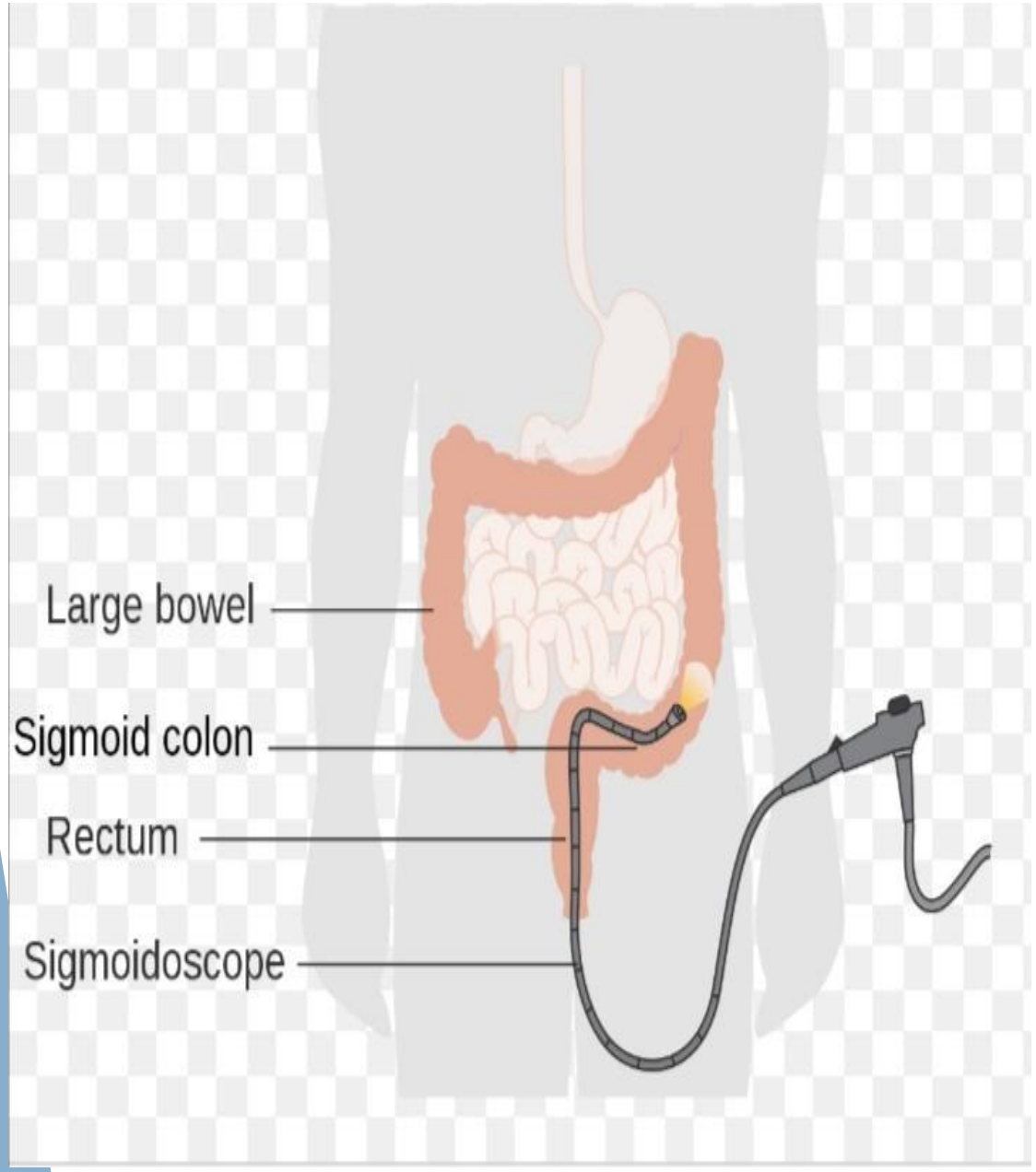
2.Sigmoidoscopy

What is it? a diagnostic test used to check the sigmoid colon , which is the lower part of your colon or large intestine.

Purpose:

check for inflammation, ulcers, abnormal tissue, polyps or cancerAbdominal pain, rectal bleeding, change in bowel habits, chronic diarrhea and other intestinal problems.

Sigmoidoscope



3. Barium enema

Is an x ray examination that shows the large intestine

To use liquid barium inserted by enema into rectum

4. CT Scan

CT scan, which can identify inflamed or infected pouches and confirm a diagnosis of diverticulitis. CT can also indicate the severity of diverticulitis and guide treatment

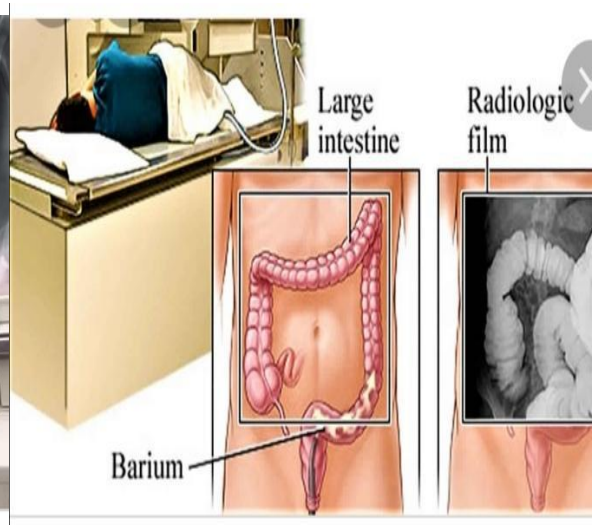
5. Ultrasound

- may be used to watch treatment of rectal cancer.
- Rectal bleeding and diverticular bleeding were difficult to diagnose by ultrasound.

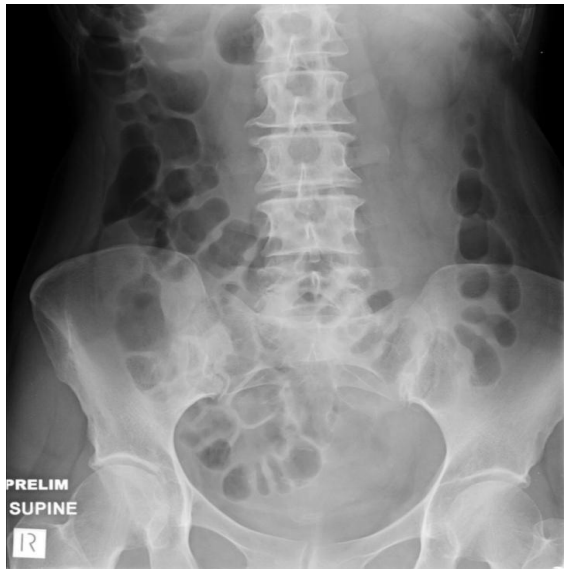
6.Proctoscopy

- The proctoscope[anoscope]: is a short illuminated tube,
- employed to inspect the anal canal
- Purpose :for the diagnosis and treatment of haemorrhoids

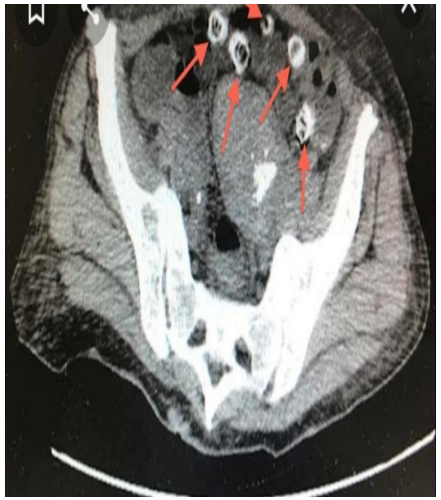
Barium enema



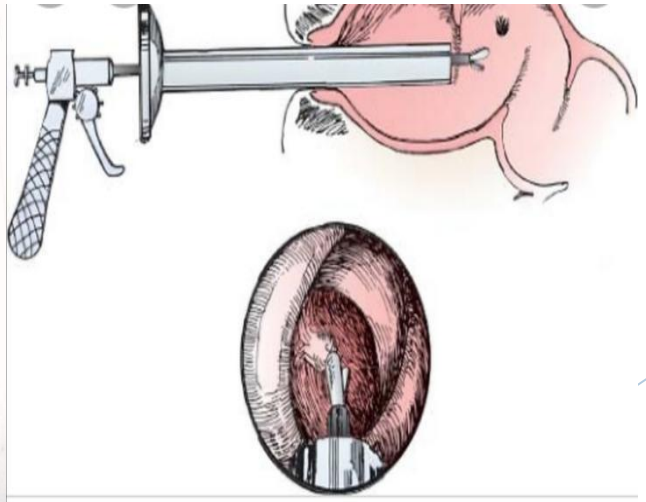
Normal



CT scan



Proctoscopy



7. Rectal examination

Examination sequence

1. Introduce your self
2. Confirm patient detials
3. Explain what you are going to do, why it is necessary and askfor permission to proceed. Tell the patient that the examinationmay be uncomfortable but should not be painful
4. Confirm constant
5. Offer a chaperone; record if this is refused. Record the nameof the chaperone.
6. Keep the room warm and with good light
7. Maintain privecy
8. Wash your hand
9. Put on gloves and examine the perianal skin, using an effectivelight source
10. Look for skin lesions, external haemorrhoids and fistulae
11. Lubricate your index finger with water-based gel

Examination sequence

12. Place the pulp of your forefinger on the anal marginand apply steady pressure on the sphincter to push yourfinger gently through the anal canal into the rectum
13. If anal spasm occurs, ask the patient to breathe in deeply andrelax. If necessary insert a local anaesthetic suppository beforetrying again. If pain persists, examination under generalanaesthesia may be necessary
14. Ask the patient to squeeze your finger with his anal musclesand note any weakness of sphincter contraction
15. Palpate systematically around the entire rectum; note anyabnormality and examine any mass. Record the percentage ofthe rectal circumference involved by disease and its distancefrom the anus

Examination sequence

16. Identify the uterine cervix in women and the prostate in men;assess the size, shape and consistency of the prostate andnote any tenderness.
17. If the rectum contains faeces and you are in doubt aboutpalpable masses, repeat the examination after the patient has defecated
18. Slowly withdraw your finger. Examine it for stool colour and thepresence of blood or mucus
19. Recover the patient
20. Dispose of used equipment into the clinical waste bin.
21. Wash your hand

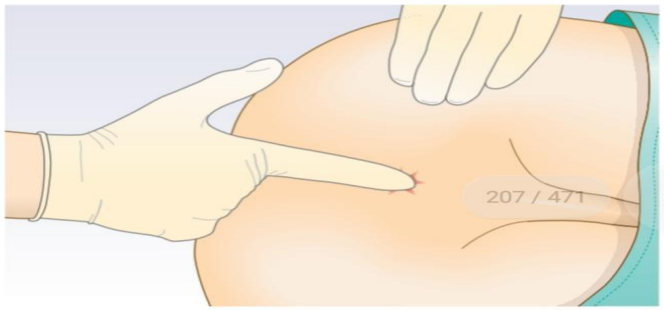


Fig. 8.25 Rectal examination. The correct method to insert your index finger in rectal examination.

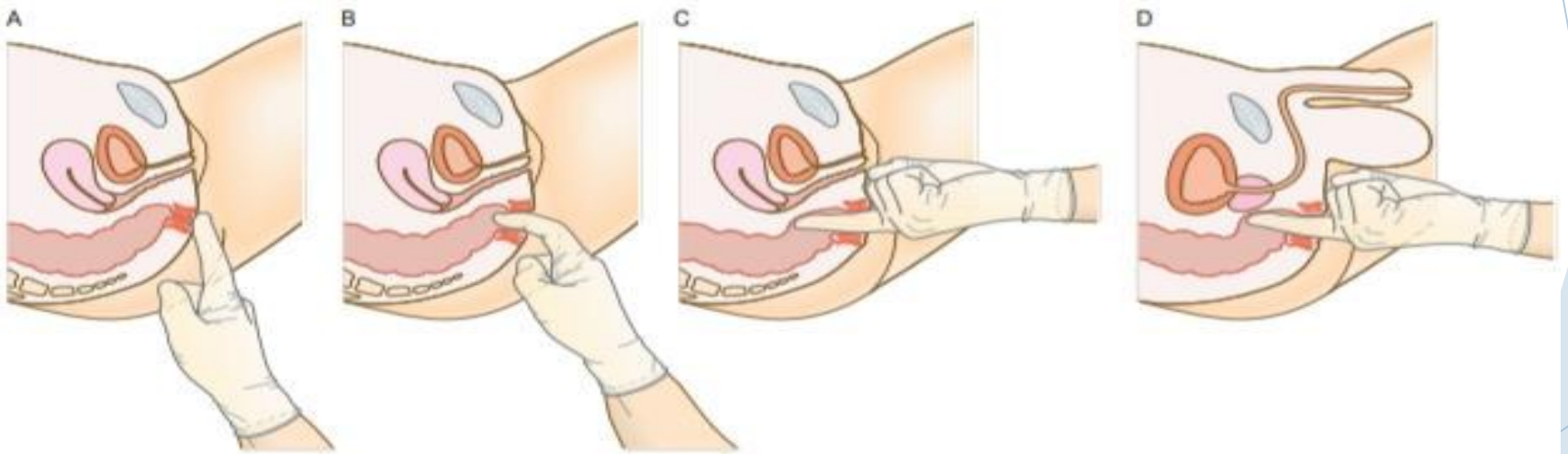


Fig. 8.26 Examination of the rectum. (A and B) Insert your finger, then rotate your hand. **(C)** The most prominent feature in the female is the cervix. **(D)** The most prominent feature in the male is the prostate.

The case

A 52-year-old man consulted in extreme perianal discomfort that he had experienced for 48 hours. He had no past history of similar problems and was otherwise asymptomatic. There was no abnormality on abdominal examination, while on examination of the perianal area there was a tense, dark blue, grape-sized swelling that was acutely tender to touch. Rectal examination was difficult to perform adequately because of pain but no other masses were palpable. What is the diagnosis, differential diagnosis and management?

Diagnosis and management

The diagnosis was thrombosed external haemorrhoid. Haemorrhoids are swellings that arise from the three pads or cushions of tissue which line the anal canal. These pads of tissue may become enlarged and engorged with blood. They then form rounded pink or darker, pea- or grape-sized swellings around the anus. They may be obviously palpable to the patient. They are more common in overweight individuals and in those who are constipated or who have a low-fibre diet. They are also common in pregnancy.

The treatment is initially with topical preparations containing a steroid or anti-inflammatory agent, and sometimes a local anaesthetic agent, and analgesia. If the haemorrhoid is thrombosed, which is often acutely painful, then application of an ice-pack may be helpful. If there is bleeding, other causes must be excluded. In this case, on review 48 hours later there was some improvement, but it was felt he should be referred for surgical treatment in the form of banding.

Possible different diagnosis

- Rectal prolapse.
- Inflammatory bowel disease, for example Crohn's disease.
- Anal fistula.
- Anal fissure.

Differential diagnosis

Rectal prolapse

- Rectal prolapse occurs mainly in elderly women. The terminal rectum is prolapsed and is visible at the anus.

Resources

- Browse's Introduction to the Symptoms & Signs of Surgical Disease 4th edition
- Macleod's clinical examination 14th edition
- Surgical Recall 8th edition
- Lecture notes General urgery 13th edition
- https//www.amboss.com/
- Hopkines medicine website
- https://my.clevelandclinic.org

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Thank You …