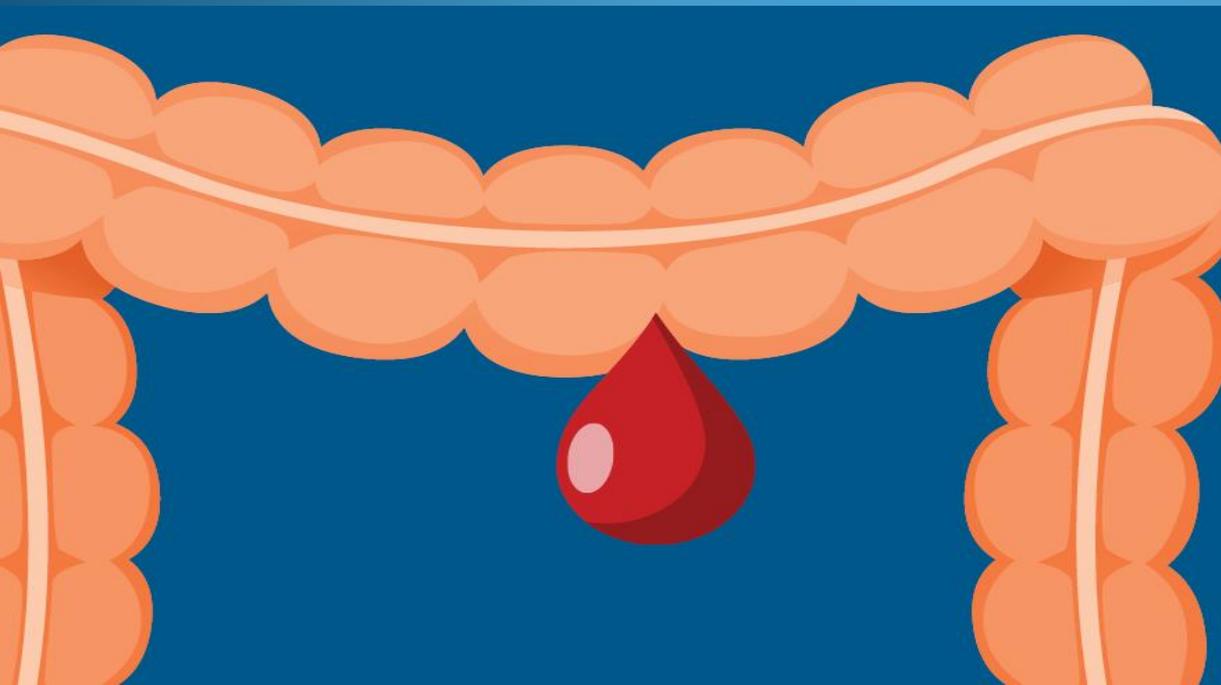
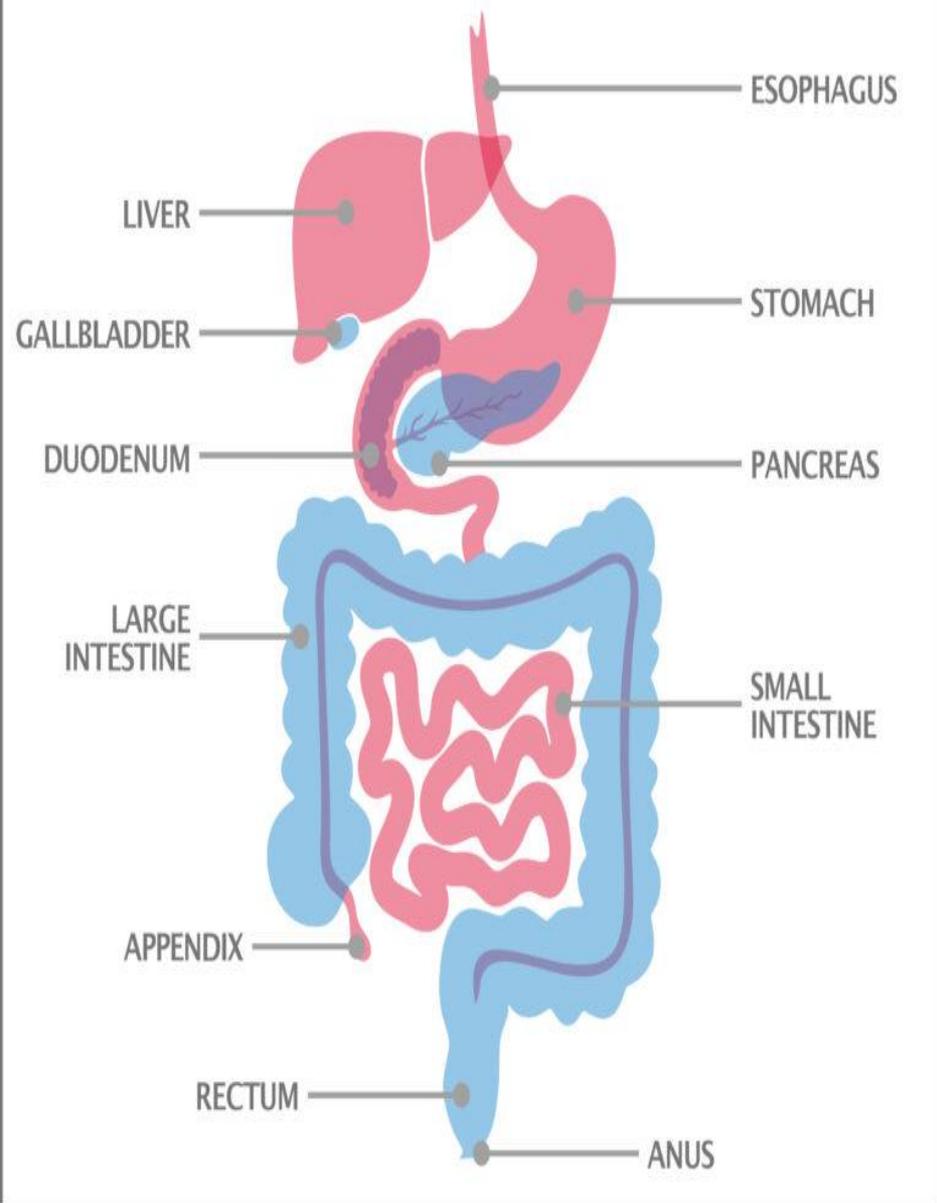


Lower GI bleeding

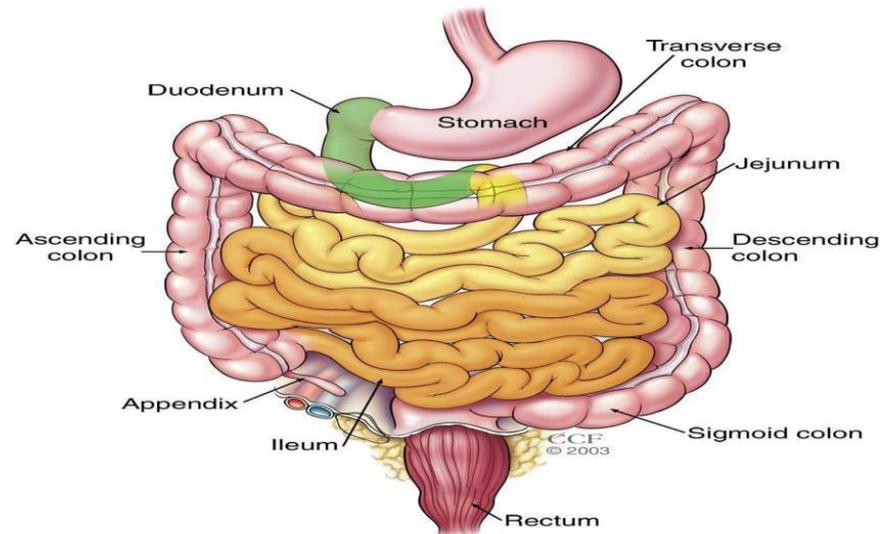


Presented by:
fuad dalaen
Ansam mahadeen
Hamzah tarawneh
Mohammad obaidat

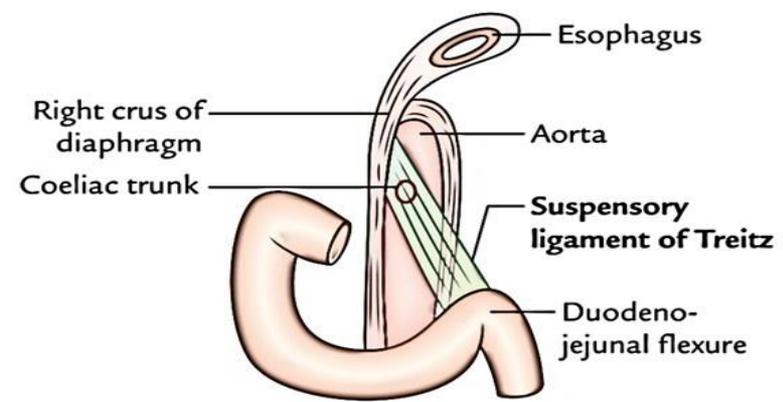
UPPER & LOWER GASTROINTESTINAL TRACTS



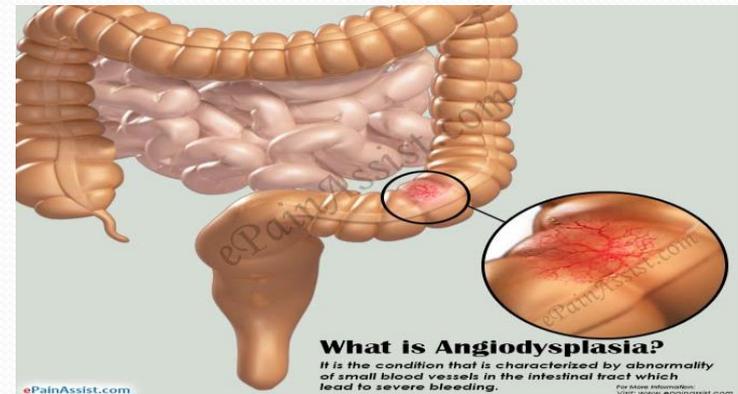
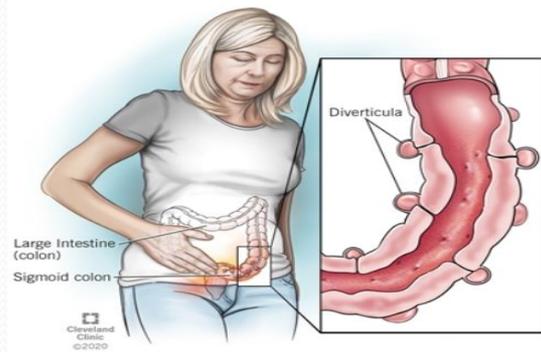
- The lower gastrointestinal (GI) tract is the last part of the digestive tract. The lower GI tract consists of the large and small intestine to the anus.
- The length of the small intestine is roughly 9-16 feet, while the large intestine is shorter measuring about 5ft long .



Definition



- **The lower GI bleeding** : abnormal hemorrhage in the GI tract distal to the **ligament of Teritz** (thin band of tissue (peritoneum) that connects and supports the end of the duodenum and beginning of the jejunum in the small intestine)
- **GI bleeding is not a disease**, but a symptom of a disease.
- The diverticulosis and angiodysplasia are the most common causes of LGI bleeding.

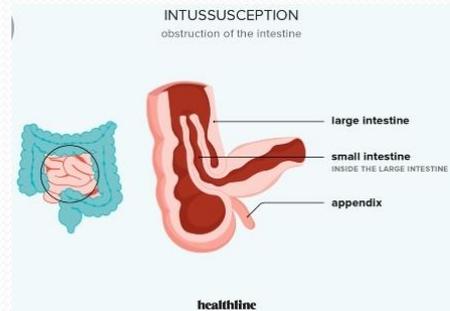


- More than 75% of bleeding stop spontaneously with 10% re-bleeds in 1 year and 50% in 10 years

EPIDEMIOLOGY



- The majority of the LGI bleeding is self limiting
- In 90% of the cases colon is the source of bleeding
- The incidence increase with age
- The mortality less than 5%
- Intussusception is the most common cause in the pediatric age



- And the Diverticular disease is the most common causes in adults

Sign and symptoms

SIGNS
AND
SYMPTOMS!

- hematochezia (the passage of fresh blood in stool), causes by : hemorrhoid, gastrointestinal bleeding , colorectal cancer , and other...
- bloody diarrhea
- anemia / hypovolemia due to hemorrhage (e.g. pallor, dizziness, weakness, syncope)
- Nonspecific symptoms may include dyspnea, abdominal pain, chest pain, and fatigue
- Unusual paleness

Massive bleeding

Moderate bleeding



Occult bleeding

Massive bleeding

- Only 10-20% patients present with massive bleeding
- Large volume of bright red blood per rectum or hematochezia
- Usually in elderly patient
- Hemodynamic unstable

SBP = 90 mmHg

HR > 100

Low urine output

- Hemoglobin level = 6 g/dl
- Bleeding more than 1.5 L / day
- For 3 days
- The most common due to diverticulosis and angiodysplasia
- Mortality rate more than 21%

Moderate bleeding

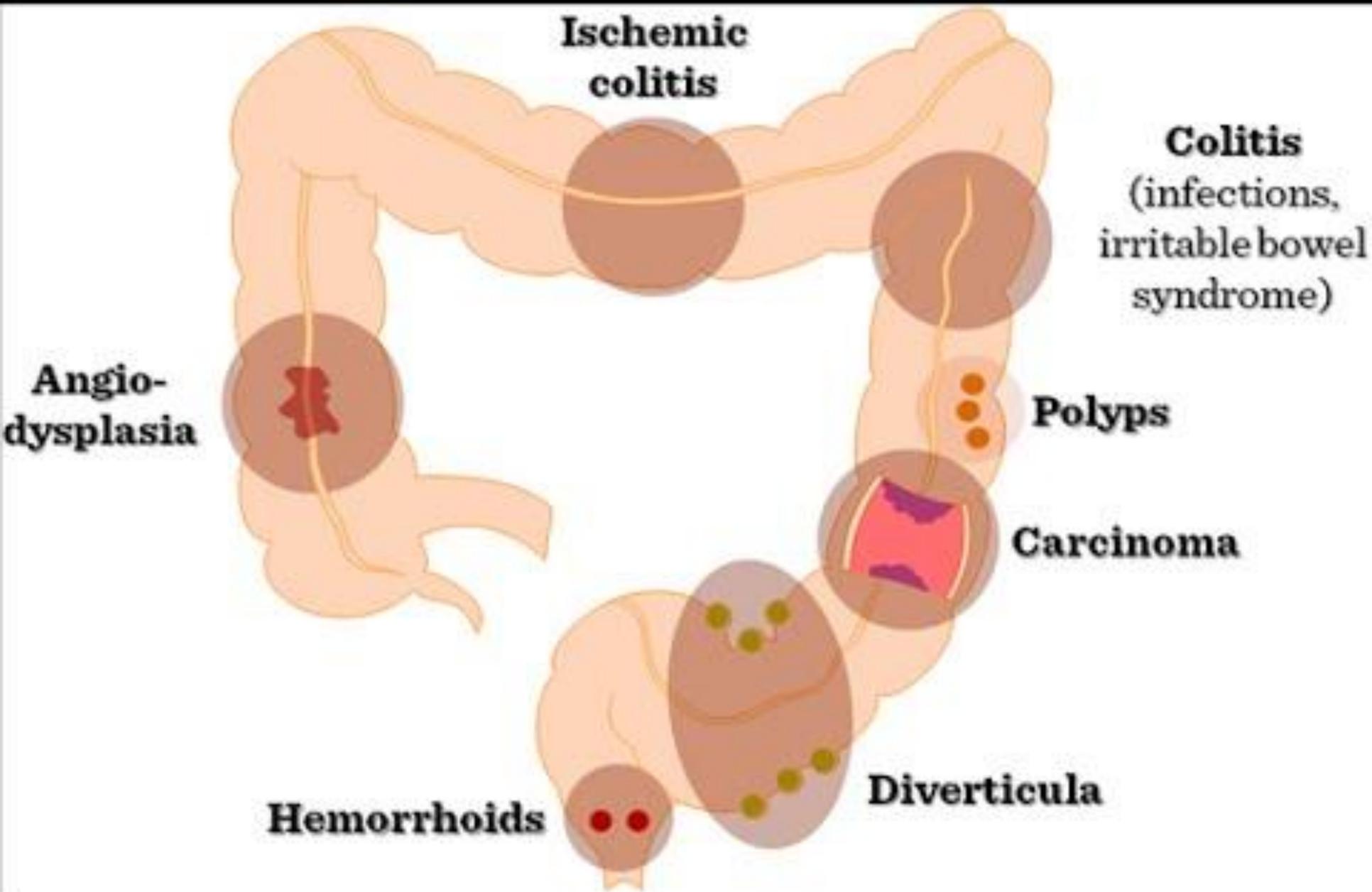
- May present as hematochezia or melena
- The patient with any age
- Hemodynamic stable

Occult bleeding

- ▣ Patient with any age
- ▣ Presented with microcytic hypochromic anemia due to chronic blood loss

Risk factors

- Low fiber diet
- Obesity , physical inactivity
- Radiation
- NSAIDs and aspirin
- Advancing age
- Extensive comorbid illnesses



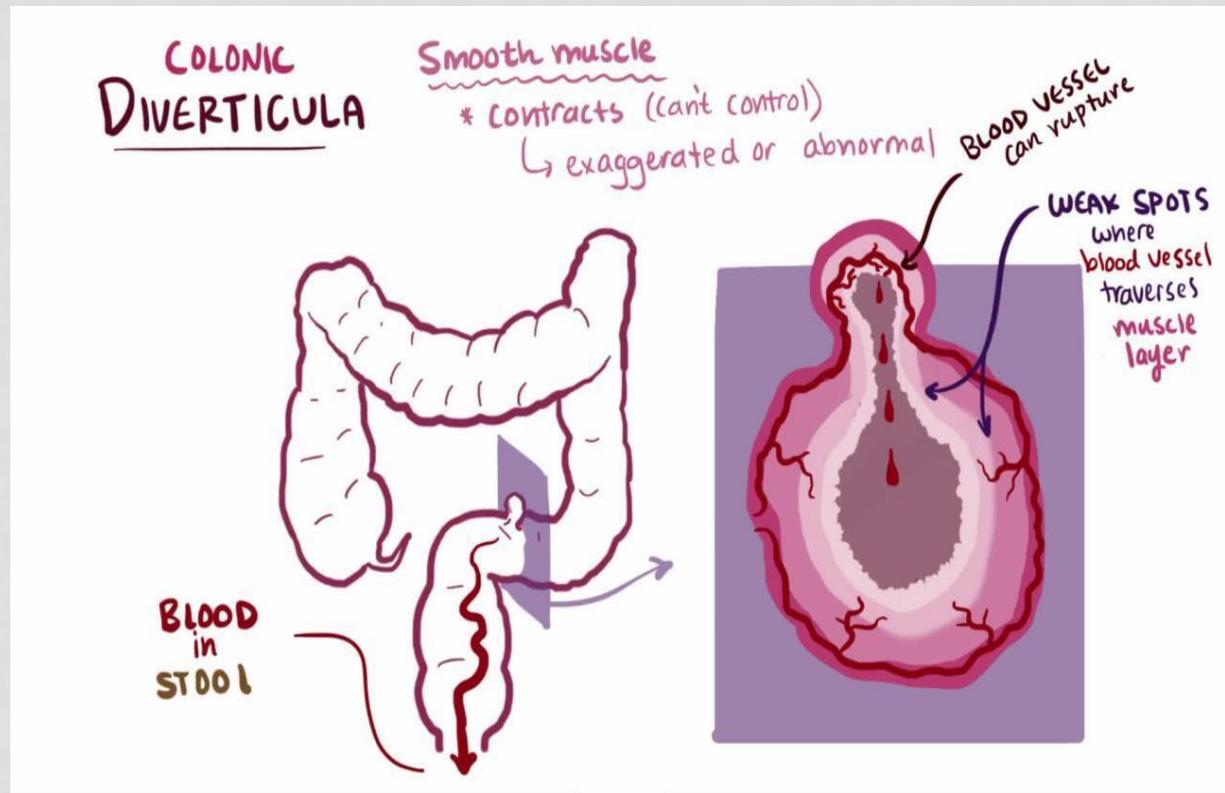
Specific causes of Colonic bleeding



Diverticular disease: This involves the development of small, bulging pouches in the digestive tract (diverticulosis), caused by low fiber dietary intake.

Formed by increased pressure on weakened spots on the intestinal walls by gas, waste or liquid

□ The complication of diverticulosis is diverticular bleeding and diverticulitis



- **The diverticulitis :inflamed or infected of one or more of the pouches**
- **The symptoms of diverticulitis :**
- Alternating diarrhea and constipation
- Painful cramps or tenderness in the lower abdomen
- Chills or fever
- Vomiting

The complication of diverticulitis : abscess , fistula, peritonitis , perforation and intestinal obstruction



Treatment

- **Diverticular disease that is asymptomatic and discovered without treatment**

- The treatment of diverticulitis depends on the severity of sign and symptoms

- **Uncomplicated diverticulitis**

1. Antibiotic
2. Liquid diet
3. Pain reliever

- **Complicated diverticulitis**

1. Intravenous antibiotic
2. Insertion of a tube to drain an abscess if one has formed

Indication of surgery

- 1- if not improved to medical surgery
- 2- Recurrent or persistent hemorrhage
- 3- at least 2 documented attacks of diverticulitis

Most common congenital anomaly of GIT

- True diverticulum (all layers of the wall of the gut)

@ TERMINAL ILEUM

Persistence of the vitelline duct

Choristoma (normal tissue @ an abnormal site)

Gastric ulcer ← H^+ ← gastric tissue @ distal ileum
pancreatic tissue @ distal ileum

Dx: technetium-99m (^{99m}Tc) pertechnetate scan

D.Dx: appendicitis

ttt: Surgical resection "laparoscopy" i.e. diverticulectomy

≈ 2-y.o. ♂

RLQ pain & blood in stool



volvulus

intussusception

obstruction

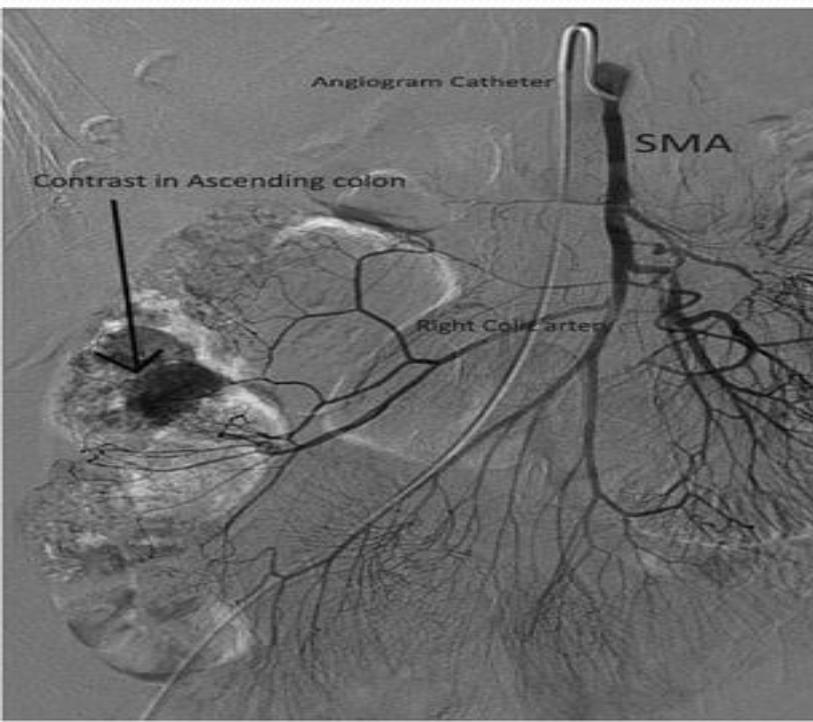
Angiodysplasia

- also called Arteriovenous Malformations [AVM's]
- Some reports state vascular lesions account upto 40% of LGI-B, However, recent reports state much low incidence
- They are acquired degenerative lesions secondary to progressive dilatation of normal blood vessels within the submucosa of the intestine
- Age of incidence > 60 yrs with M=F, usually associated with aortic stenosis and renal failure, esp in older patients, the risk of bleeding is increased in disorders of coagulation.
- Haemorrhage tends to arise from right side of colon, with CECUM being most common.



Diagnosis

- COLONOSCOPY: Red stellate lesions with a surrounding rim of pale mucosa.
- ANGIOGRAPHY: dilated, slowly emptying veins, and sometimes early venous filling



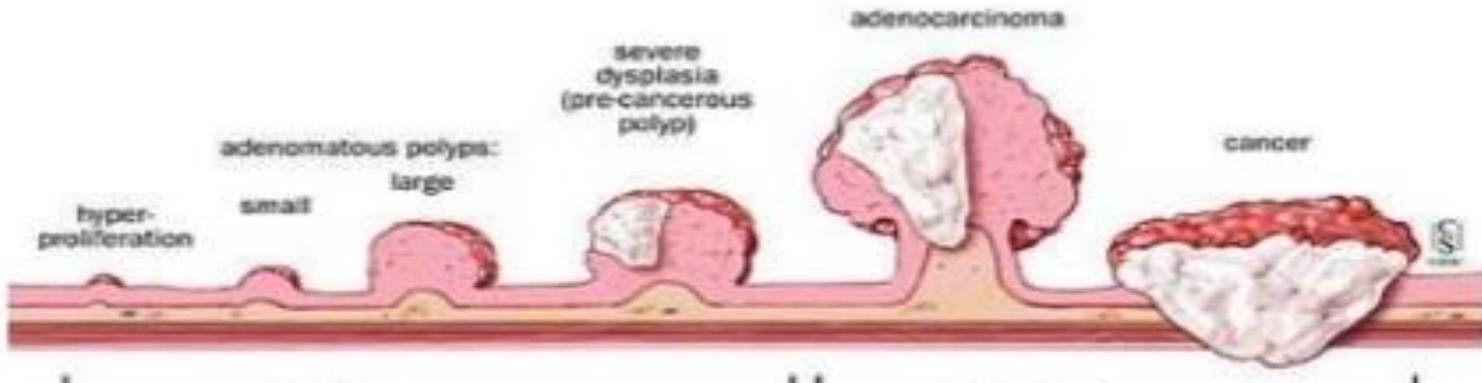
Treatment

- Treatment with intra-arterial vasopressin, endoscopic management, injection with sclerosing agents, lastly Segmental resection most commonly a Right colectomy is effective.

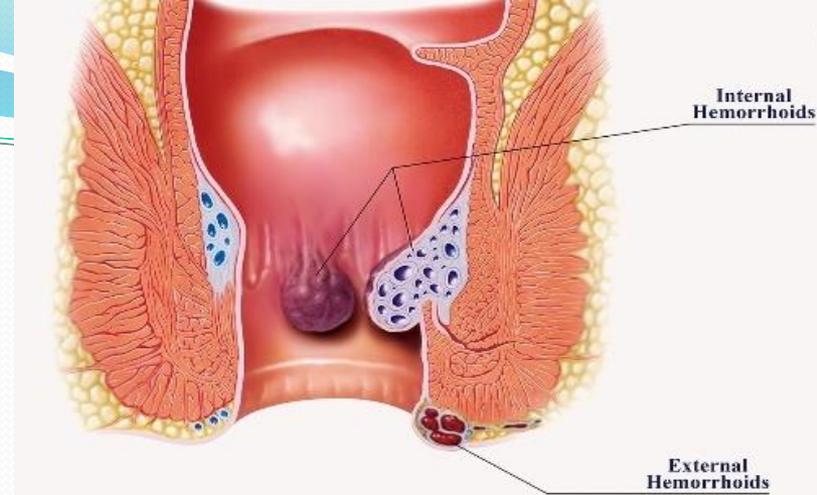


Neoplasia of LGI tract including anal canal

- Uncommon cause of significant lower GI bleed
- Bleeding is usually painless, intermittent and slow in nature, frequently assoc with IDA.
- May present as polyp, sessile polyp, ulcer or mass, sloughing off of the lesion may present as LGI bleeding
- Polyps also bleed, but usually occurs after a polypectomy
- Juvenile polyps are second most common cause of bleeding in pts younger than 20yrs



Anorectal diseases



- **Hemorrhoid** (commonly known as piles):
- arise from congestion of the internal and/or external venous plexuses around the anal canal.
- They are extremely common in adults.
- The aetiology is unknown, although they are associated with increased intra abdominal pressure i.e : with constipation and straining, and may develop for the first time during pregnancy.

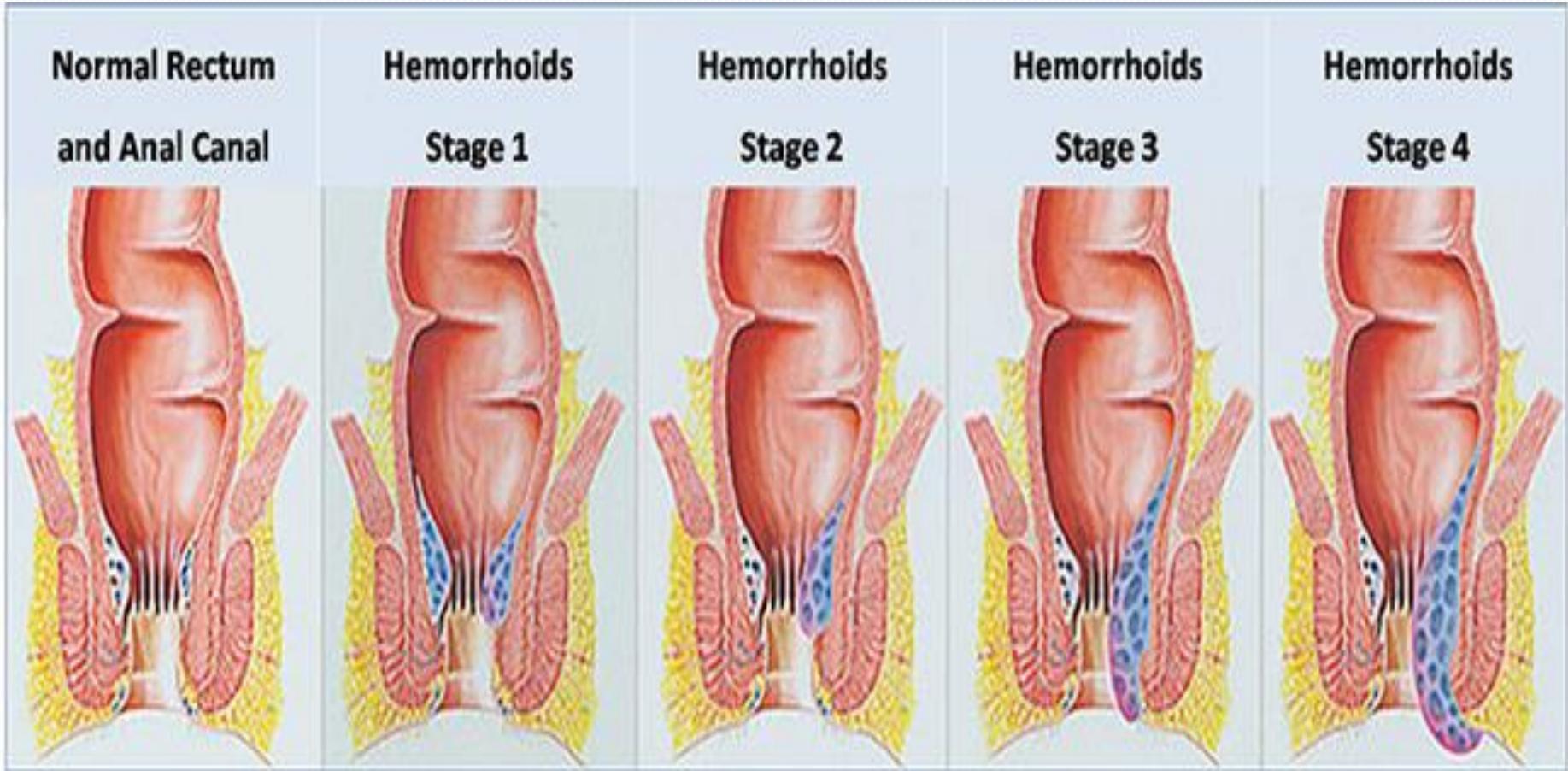
ANORECTAL DISEASES

- **Internal hemorrhoid** : located proximal to dentate line , Usually painless, thus banding, ligation can be done.
- **External hemorrhoid** : located distal to dentate line These are painful, usually self limited.

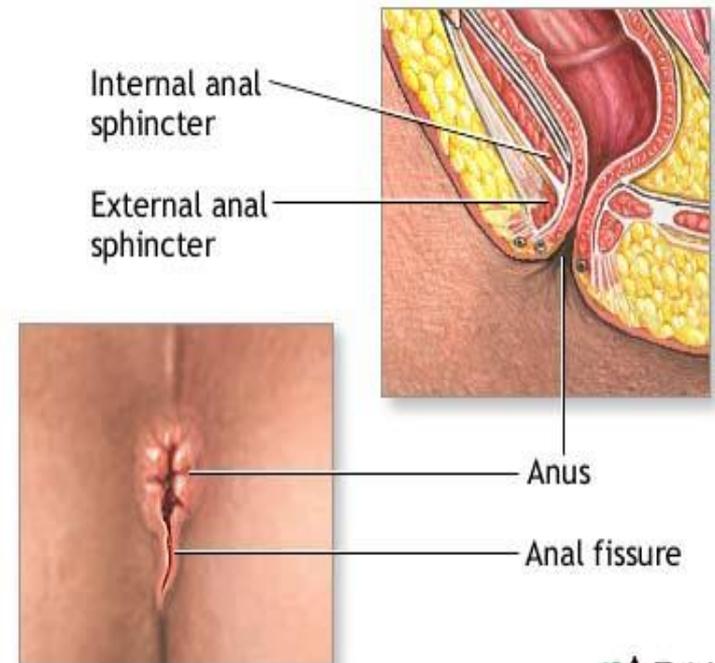
Classification of internal hemorrhoids and treatment:

<u>1st degree</u>	Painless bleeding , no prolapse	Medical therapy by dietary fiber, stool softeners, sitz bath Operative by rubber band ligation , infrared photocoagulation, sclerotherapy
<u>2nd degree</u>	Prolapse through anus during straining but reduces spontanrously	Same as above
<u>3rd degree</u>	Prolapse through anus, requires manual reduction	Rubber band ligation, sclerotherapy, operative hemorrhoidectomy
<u>4th degree</u>	Cannot be reduced , thrombosed	operative hemorrhoidectomy

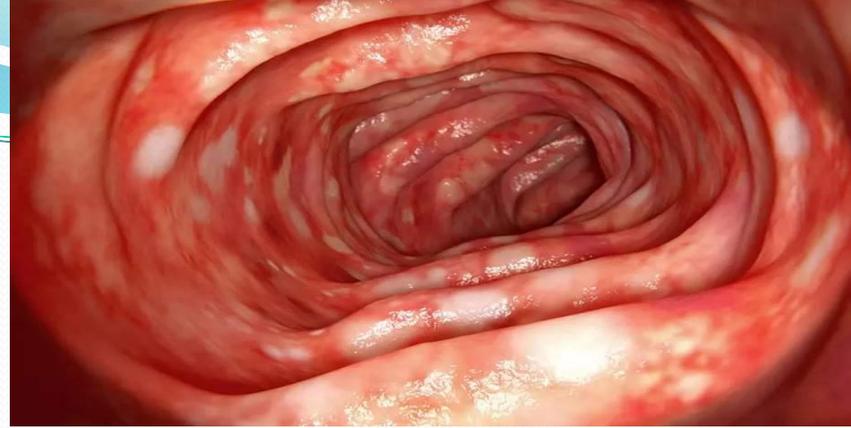
Internal hemorrhoids classifications:



- **Anal fissure**:
- it is a cause of painful bleeding per anus.
- Fissure is usually presenting with associate infection
- Conservative management done by antibiotics, analgesics, stool softener, anal sphincter relaxant, local dry dressing .



IBD



Both infective/inflammatory colitis present as LGI bleeding , pus may also be present.

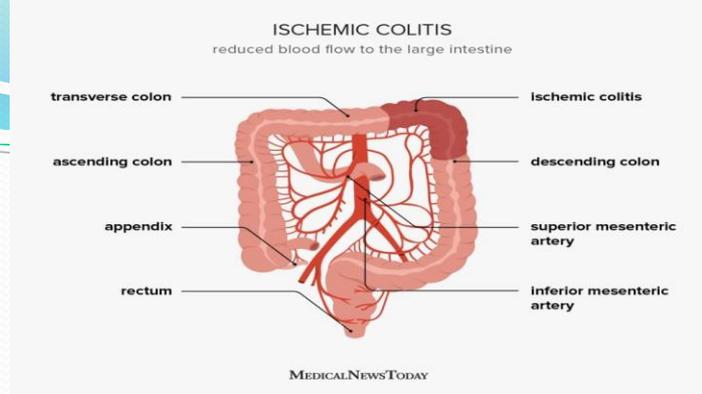
- **Diagnosis**
- The diagnosis of **Ulcerative colitis** and **Crohn's disease** is usually confirmed by **biopsies of colonoscopy** .
- Although colonoscopy and sigmoidoscopy are still employed , now stool testing for the **presence of C.difficile toxins is frequently the first-line diagnostic approach** with history of prior antibiotic use or hospitalization.

Ischemic Colitis

Ischemic colitis occurs when blood flow to part of the large intestine (colon) is temporarily reduced, usually due to constriction of the blood vessels supplying the colon or lower flow of blood through the vessels due to low pressures. The diminished blood flow doesn't provide enough oxygen for the cells in your digestive system, which can result in tissue damage to the affected area of intestine.

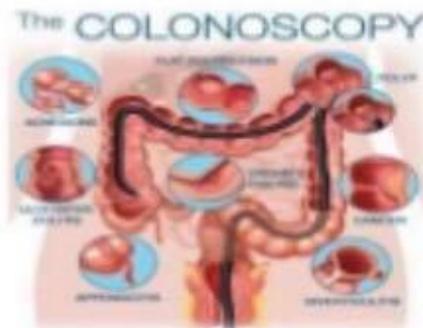
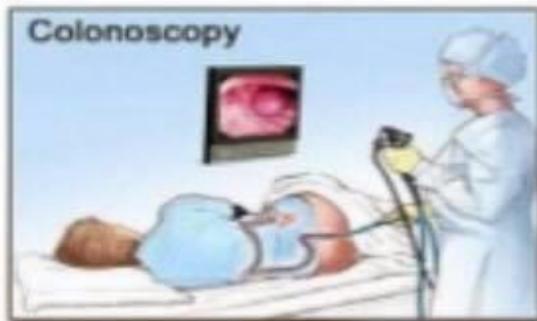
Any part of the colon can be affected, but ischemic colitis most commonly causes pain on the left side of the belly area (abdomen)

- Bright red or maroon blood in stool , passage of blood alone
- You may need medication to treat ischemic colitis or prevent infection, or you may need surgery if the colon has been damaged. Most often, however, ischemic colitis heals on its own



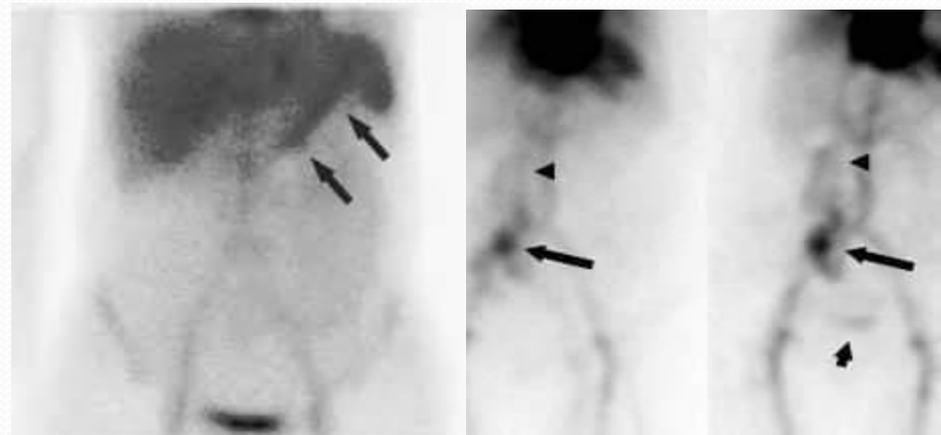
Diagnostic modalities for LGI bleeding :

- **Colonoscopy** : full length colonoscopy is the most important investigation. It helps in visualizing from rectum to last 10-15cm of terminal ileum .
- **Diagnostic uses** : Imaging + Biopsy of the lesion
- **Therapeutic uses** : Electro-cauterization of bleeding points + polypectomy



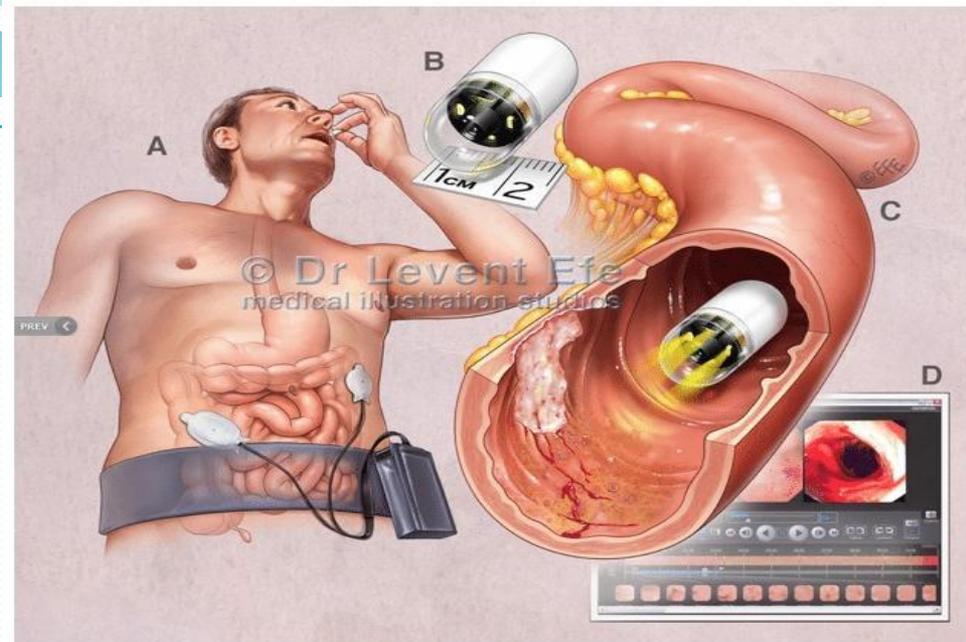
Radionuclide scanning (Technecium-99m labelled RBC scintigraphy)

- A sample of patient's blood is taken and then the RBC of the sample is labelled with Tc-99cm
- Next the sample of blood is injected into the patient and serial scintigraphy scan are taken in fixed intervals.
- It only has diagnostic value. But the advantage is that it can detect very small amount of bleeding (0.5-1 ml/min).



CAPSULE ENDOSCOPY

- Non invasive procedure
- Done in stable patients
- Duration is 8h/500 00 images
- Only diagnostic value
- The image cannot be controlled from outside, thus pathological site may be missed



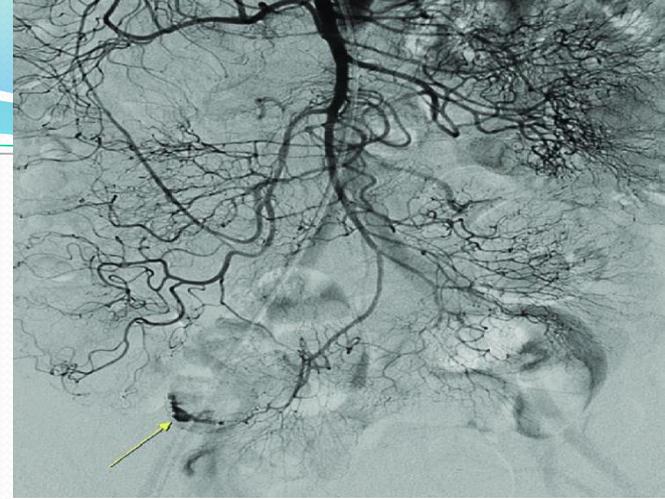
Capsule Endoscopy

Medical illustration narrating the story of **Capsule Endoscopy** for patients. A. Patient swallows the capsule, and carries the data recorder for eight hours. B. The capsule is the size and shape of a pill and contains a tiny camera. C. The camera is shown here taking pictures of a bleeding ulcer inside the small intestine. D. The picture of the bleeding ulcer is later reviewed by the doctors. (Available for purchase at <http://bit.ly/1B1vAn>)

▶ 2/37

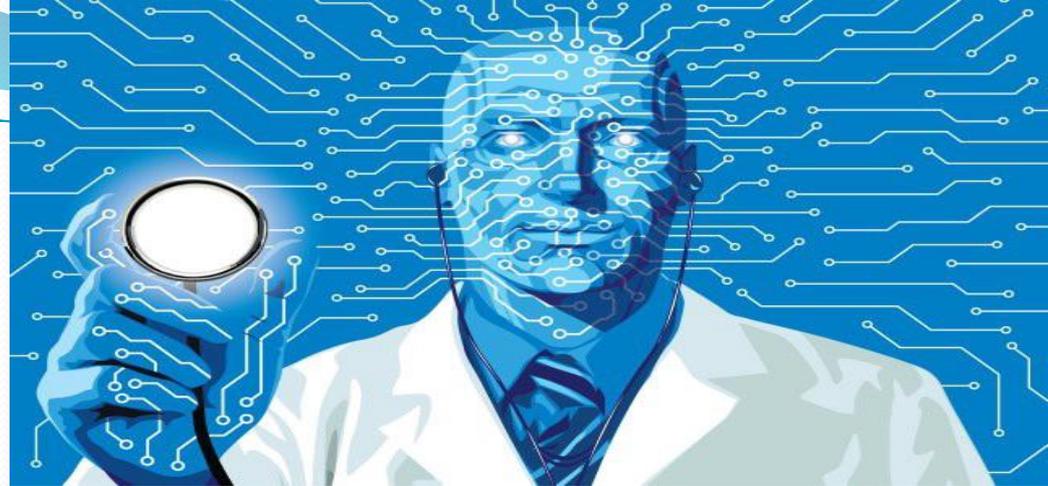
CLOSE

Mesentric Angiography



- ▣ In this procedure bleeding rate of 0.5-1 ml/min can be detected .
- ▣ Selective angiography is done by catheterising the arterieas selectively under fluoroscopic guidance.
- ▣ Therapeutic implication is done by embolisation of the culprit vessles

DIAGNOSIS



- Laboratory test.
- Stool of occult blood.
- Hemoglobin/hematocrit level (may not decreased in acute bleeding)
:hemoglobin level $>7 -8$ gm/dl is generally acceptable in young ,healthy patients without active bleeding. However , most elderly patients (especially those with cardiac diseases) should have a hemoglobin level >10 gm/dl
- A MCV is suggestive of iron deficiency anemia (chronic blood loss).patients with acute bleeding have normocytic red blood cells .
- Coagulations profile.
- LFTs, renal function for GFR .
- Anoscopy or proctosigmoidoscopy.
- Colonoscopy.
- A bleeding scan
- Arteriography.
- Exploratory laparotomy , surgery to open the abdomen



TREATMENT



- Generally:
- If patient is hemodynamically unstable, resuscitation e.g: IV fluid , transfusion . Once the patient is stabilized , obtain a diagnosis.
- Supplemental oxgen .
- Place tow large-bore IV lines. Give IV fluids or blood if patient is volume depleted .
- Draw blood for hemoglobin and hematocrit , PT/INR,PTT, and platelet count . Monitor hemoglobin every 4 to 8 hours until the patient is hemoglobin stable for at least 24 hours.
- Type cross-match adequte blood (PRBCs). Transfuse as the clinical condition demands.
- Lower GI bleeding
- Colonoscopy
- Arteriography with embolization .
- Surgical resection of involved area.

INDICATION FOR SURGERY



- Hemodynamically unstable patients who have not responded to IV fluid, transfusion, endoscopic intervention, or correction of coagulopathies.
- Severe initial bleed or recurrence of bleed after endoscopic treatment.
- Continued bleeding for more than 24 hours.
- Visible vessel at base of ulcer (30% to 50% chance of rebleed).
- Ongoing transfusion requirement (five units within first 4 to 6 hours)
-



THANK YOU 😊