Upper Gastrointestinal Bleeding

Dr. Nadia farhat ezzawi

Gastroenterology department

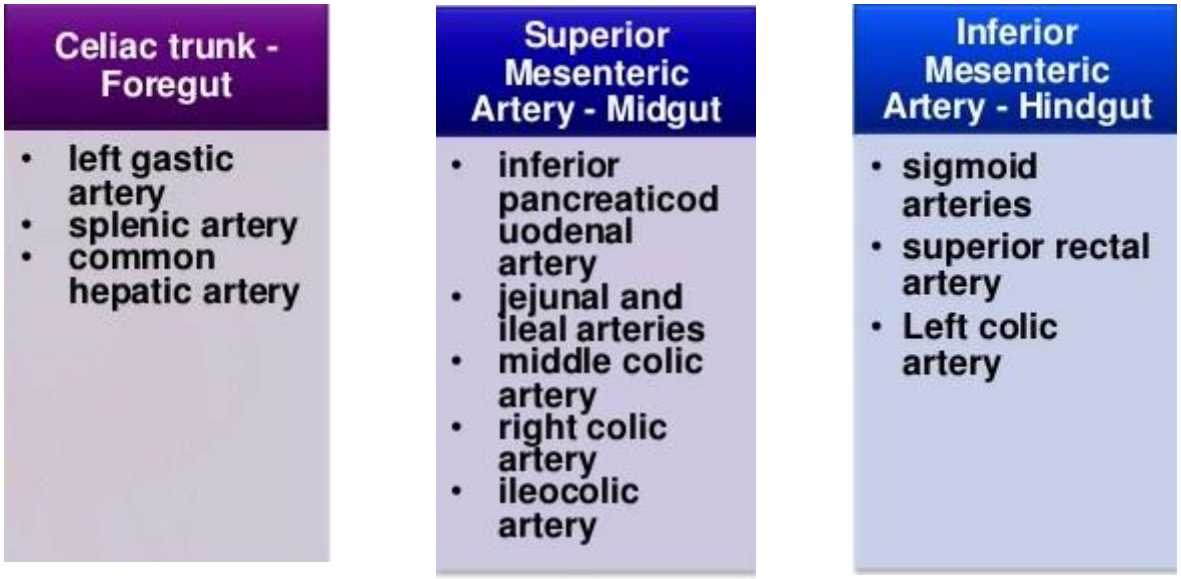
BMC

Learning Objectives

- Review the major causes of GI bleeding and important elements of the history .
- Know the important elements of the physical exam and diagnostic evaluation.
- Understand acute management of GI bleeding .

Blood supply

- Mostly by anterior branch of abdominal aorta.



Upper GI bleeding :

- Source from pharynx to the duodenum
- (Ligaments of treitz):
- It is asuspensory muscle connects to both the third and fourth parts of the duodenum, attaches posteriorly to duodenojejunal flexure behind the pancrease,
- It plays the embryological role in fixating the jejunum .
- It is the anatomical land mark between upper and lower GIT tract.

Upper GI bleeding

- GIT bleeding remains a major medical problem.
- About **75%** of patients presenting to ER with GI bleeding have an upper source.
-in – hospital mortality of **5 %** can be expected.

- Clinically manifested by:-

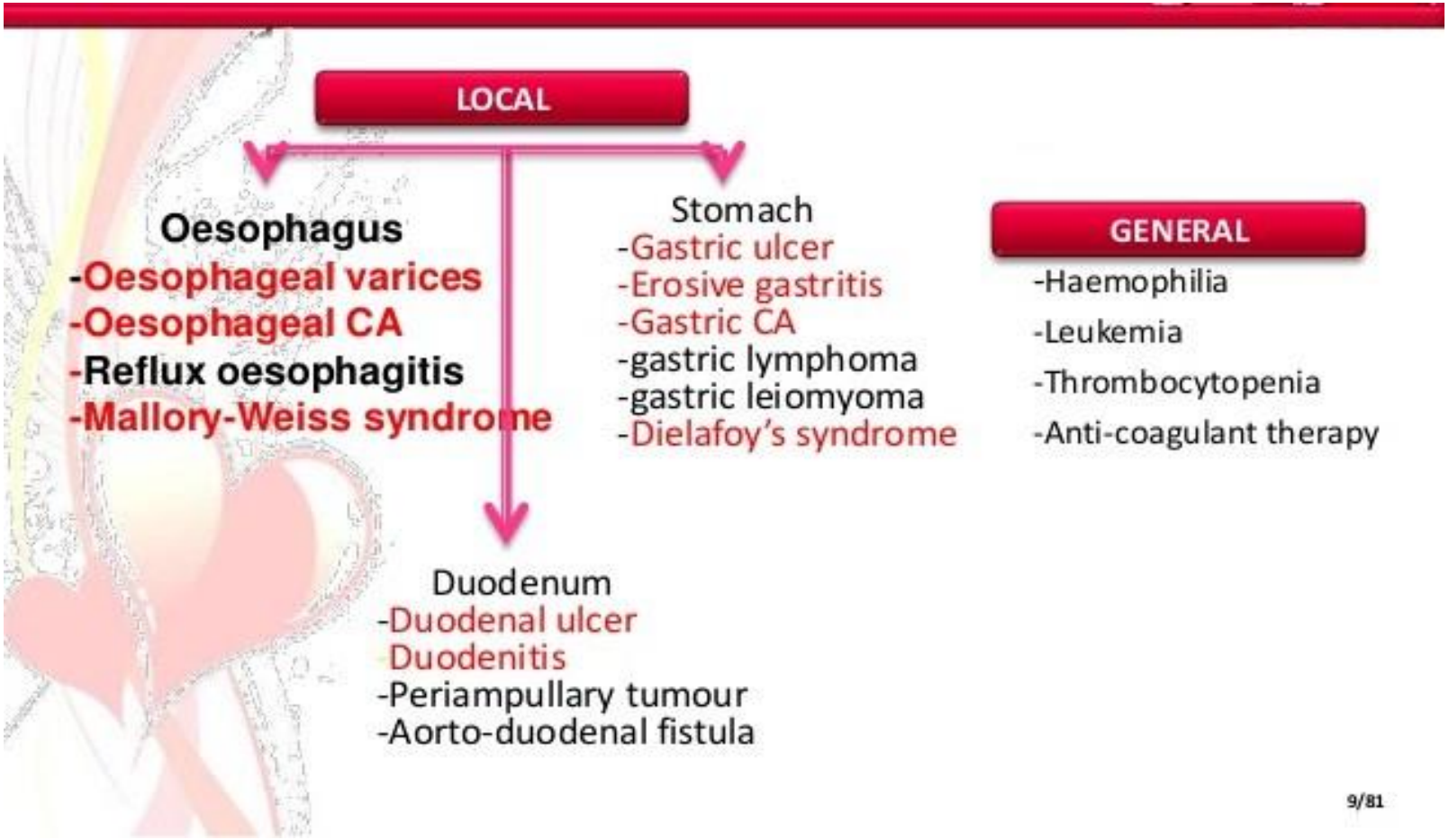
Hematemsis: vomiting of fresh blood.

Melena :passage of loose ,black tarry stool with characteristic foul smell.

Coffee ground vomiting: blood clot in vomitus (indicate old blood , and source from the stomach).

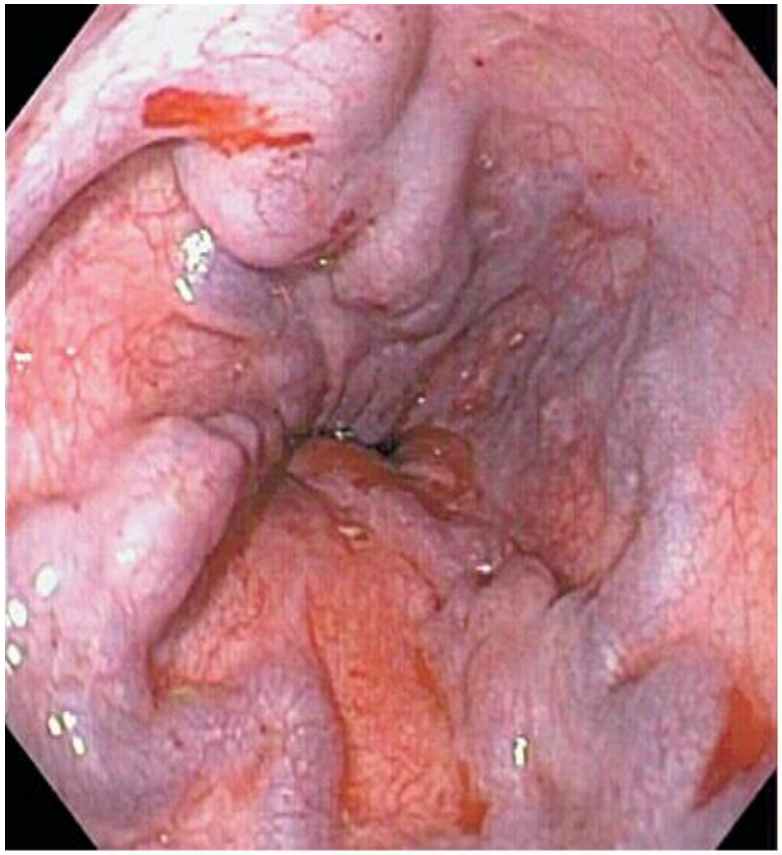
Hematochezia: passage of bright red blood per rectum (if the hemorrhage is sever).

Etiology


LOCAL
Oesophagus
-Oesophageal varices
-Oesophageal CA
-Reflux oesophagitis
-Mallory-Weiss syndrome
Stomach
-Gastric ulcer
-Erosive gastritis
-Gastric CA
-gastric lymphoma
-gastric leiomyoma
-Dielafoy's syndrome
Duodenum
-Duodenal ulcer
Duodenitis
-Periampullary tumour
-Aorto-duodenal fistula
GENERAL
-Haemophilia
-Leukemia
-Thrombocytopenia
-Anti-coagulant therapy
9/81

1- Oesophageal varices

- Abnormal dilatation of subepithelial and submucosal veins due to portal HTN.
- Haematemsis & or melena.
- Aim of ttt is to prevent recurrent bleeding in cirrhotic patient:



Oesophageal varices

- nonselective beta blockers(unless C/I).
- endoscopic variceal ligation.
- transjugular intrahepatic portosystemic shunts, and
- liver transplantation.
- according to AASLD.
- -- **injection sclerotherapy.**
- -- **Nitrates plus B Blockers** : improves the hemodynamic response and may markedly lower the rate of rebleeding .

2-Oesophageal cancer

-8th most common cancer seen throughout the world.

-40% occur in the middle 3rd of the oesophagus and are sequamous carcinomas.

-Adenoca (45%) occur in the lower 3rd of the oesophagus and at the cardia

-Tumours of the upper 3rd are rare(15%).

- Symptoms usually are : dysphagia, wt loss, abdominal pain , vomiting & hematemsis.

2-Oesophageal cancer

- **Causes**
- Genetic Factors
- Environmental Factors
- Alcohol
- Cigarette Smoking
- NutritionIron, riboflavin, and vitamin A deficiencies Low consumption of each of the following food groups – fresh and frozen meat, fish, fruits and vegetables, and dairy and egg products

causes

- Achalasia.
- radiation exposure to the esophagus.
- Barrett's Esophagus:

  intestinal-type metaplasia in the tubular esophagus, is a well-established risk factor for adenocarcinoma of the esophagus

3-Mallory weiss syndrome

It is alongitudinal tear occurs at the gastroesophageal junction.

May occure after any event that provokes increase in intragastric pressure or gastric prolapse into the oesophagus.

Precipitating factors:

.HH

.Retching & vomiting

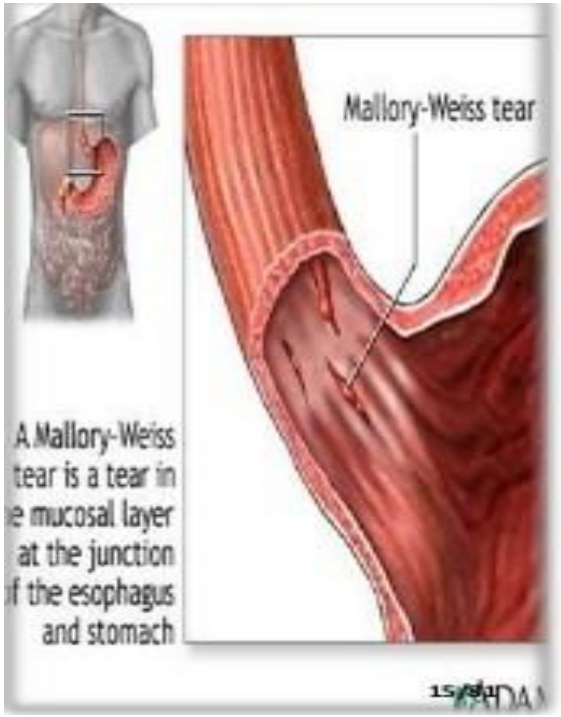
.Straining

.Hiccuping

.Couphing

.Blunt abdomonial trauma

.Cardiomyopathy



Bleediing stops spontanousiy in 80-90 % of patients

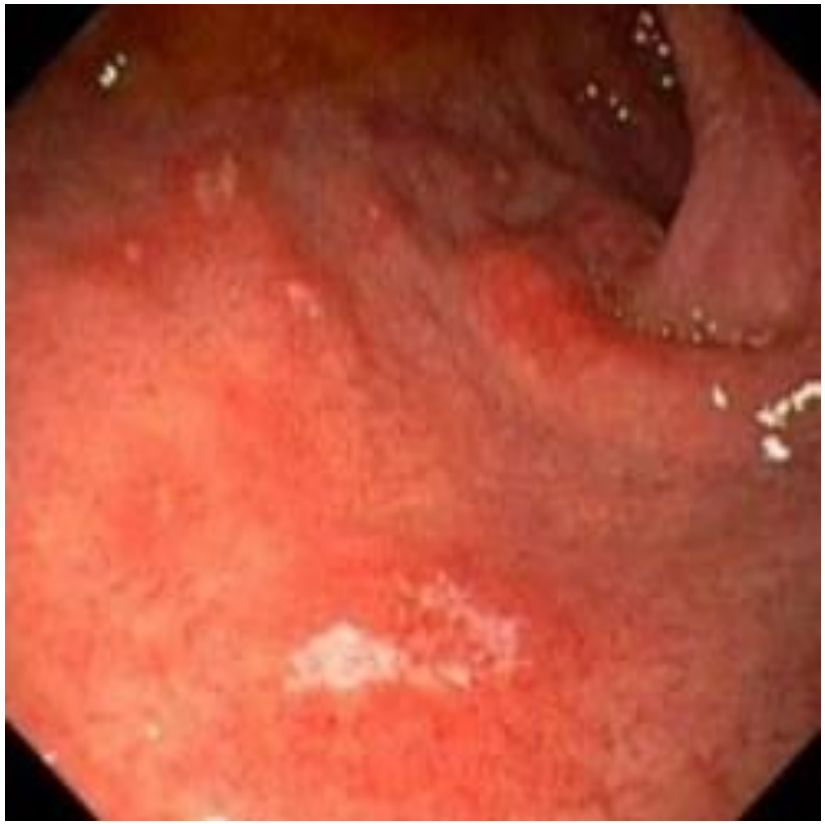
Treatment: electrocoagulation , or heater probe

epinephrine injection(vasoconstriction)

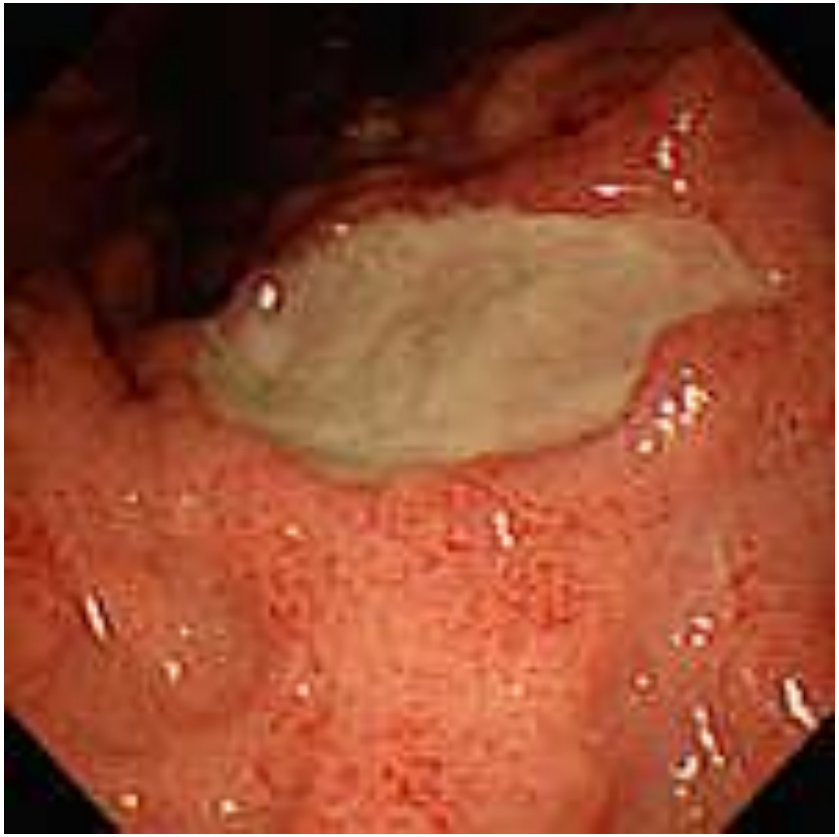
endoscopic band ligation or hemoclipping

Peptic ulcer diseases

Erosive duodenitis



Gastric ulcer



- Acute mucosal inflammatory process.

Accompanied by hemorrhage into the mucosa and sloughing of the superficial epithelium.

Patient presented by

Haematemsis , melena & abdominal pain.

- Etiology:
- NSAID.
- Alcohol
- Smoking
- Chemotherapy
- Uremia
- Stress
- Ischemia and shock.

6-Gastric cancer

Benign:

.Adenomatous polyps

.Leiomyoma

.Neurogeni tumour

.Fibromata

.Lipoma

Malignant:

.Gastric adeno carcinoma

.Lymphoma

.Smooth muscle tumor

C/F: **non specific** : indigestion . Flatulence . Dyspepsia

alarming : loss of weight , anemia , vomiting and or Hematemsis , melena dysphagia , epigastric pain , epigastric mass.

signs of metastases: jaundice , ascitis , diarrhea, intestinal obstruction

*Treatment: -*radical total gastrectomy

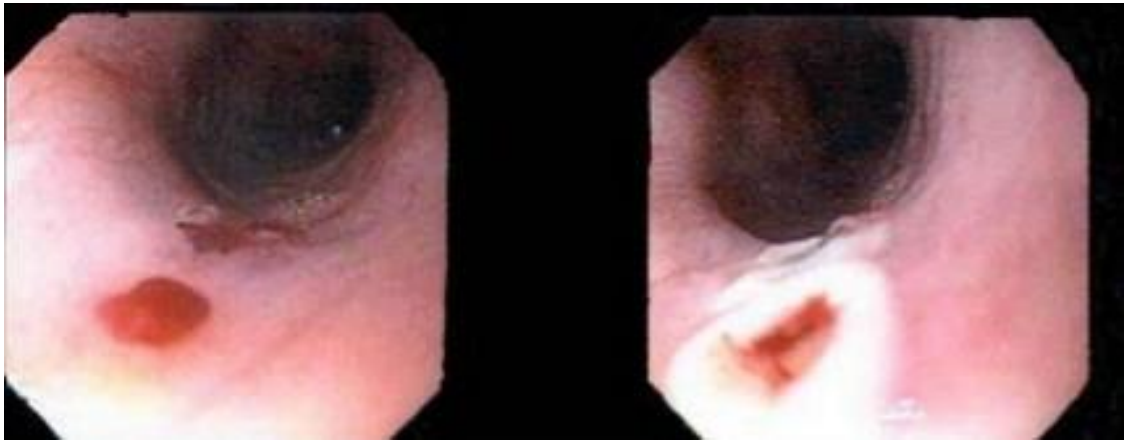
- palliative resection
- palliative bypass

7-Dieulafoys disease

-Rare

-Erosin of mucosa overlying artery in stomach causes necrosis of arterial wall and resultant hemorrhage.

-Gastric arterial venous abnormality.



8-Duodenitis

Causes:

-Hpylori associated

-Aspirin

-NSAID

-High acid secretion

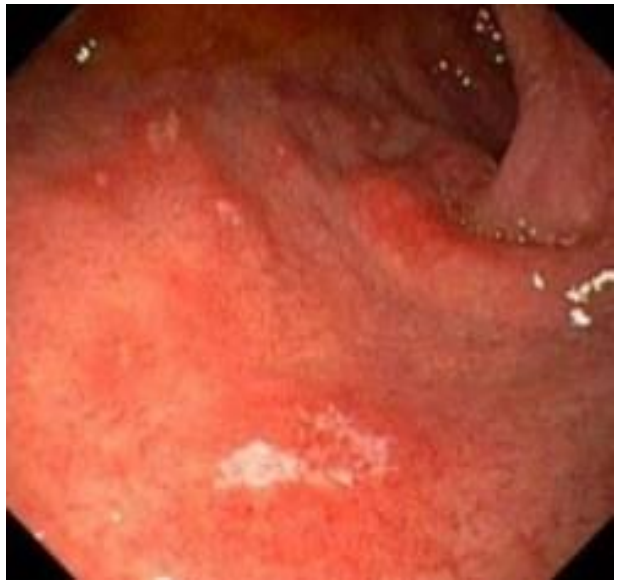
C/F

.asymptomatic

.Epigastric pain with N&V

.Haematemsis and melena

.Massive UGIbleeding



Duodenitis

Endoscopic picture : redness in the wall of small intestine , if sever : shallow eroded areas with bleeding

NSAID , Aspirin) (Treatment **: stop medications**

H2 blockers & PPI

Hpylori eradication

Approuch to patient with GIT bleeding

-Patients with GI bleeding often present with hematemesis, melena ,haematochezia.

-If the haemorrhage is sever: patient presented with comlications of anemia including chest pain , syncope , fatigue & SOB.

-Physical exanimation performed concentrating on the following :

Vital signs:to determine the severity of bleeding and the time of intervention

Abdominal and rectal examination in order to determine possible causes of bleeding .

Assessment for portal HTN and stigmata of chronic liver disease in order to determine if bleeding is from varices .

Rectal bleeding could be of upper GI source; **NGT** insertion may help to determine the source (if positive aspiration).

The goal of the patient's physical examination is to evaluate for **shock** and blood loss

Cool extremities, oliguria, chest pain, confusion.

Resuscitation :

-Air way and oxygen

-Blood transfusion

-Insert urine catheter and monitre the UOP

-Consider CV line to monitre CVP and guide fluid replacement.

-Order CXR, ECG, ABG for high risk patients.

-Arrange for urgent endoscopy

-Notify surgeon of all sever bleeds on admission

.

Investigations :

CBC ,LFT , RFT , Coagulation profile .

Viral serology.

Uss

Ct scan

Barium meal /double contrast .

Endoscopy.

Capsule endoscopy.

Medications

- Acid Suppression
  - **PPI**
    - Protonix 80mg IV bolus, then 8mg/hr infusion
    - Esomeprazole at the same dose
- **Somatostatin analogues**
  - Suspected variceal bleeding/cirrhosis
  - Octreotide 50mcg IV bolus, then 50mcg/hr infusion
- **Antibiotics**
  - Suspected variceal bleeding/cirrhosis
  - Most common regimen is Ceftriaxone (1 g/day) for seven days
    - Can switch to Norfloxacin PO upon discharge

Risk factors for death

-Advanced age

-Shock(p>100 b/min. syst BP < 100 mmhg

-Comorbidity (hepatic and renal failure, disseminated malignancy).

-GI malignancy(worse prognosis)

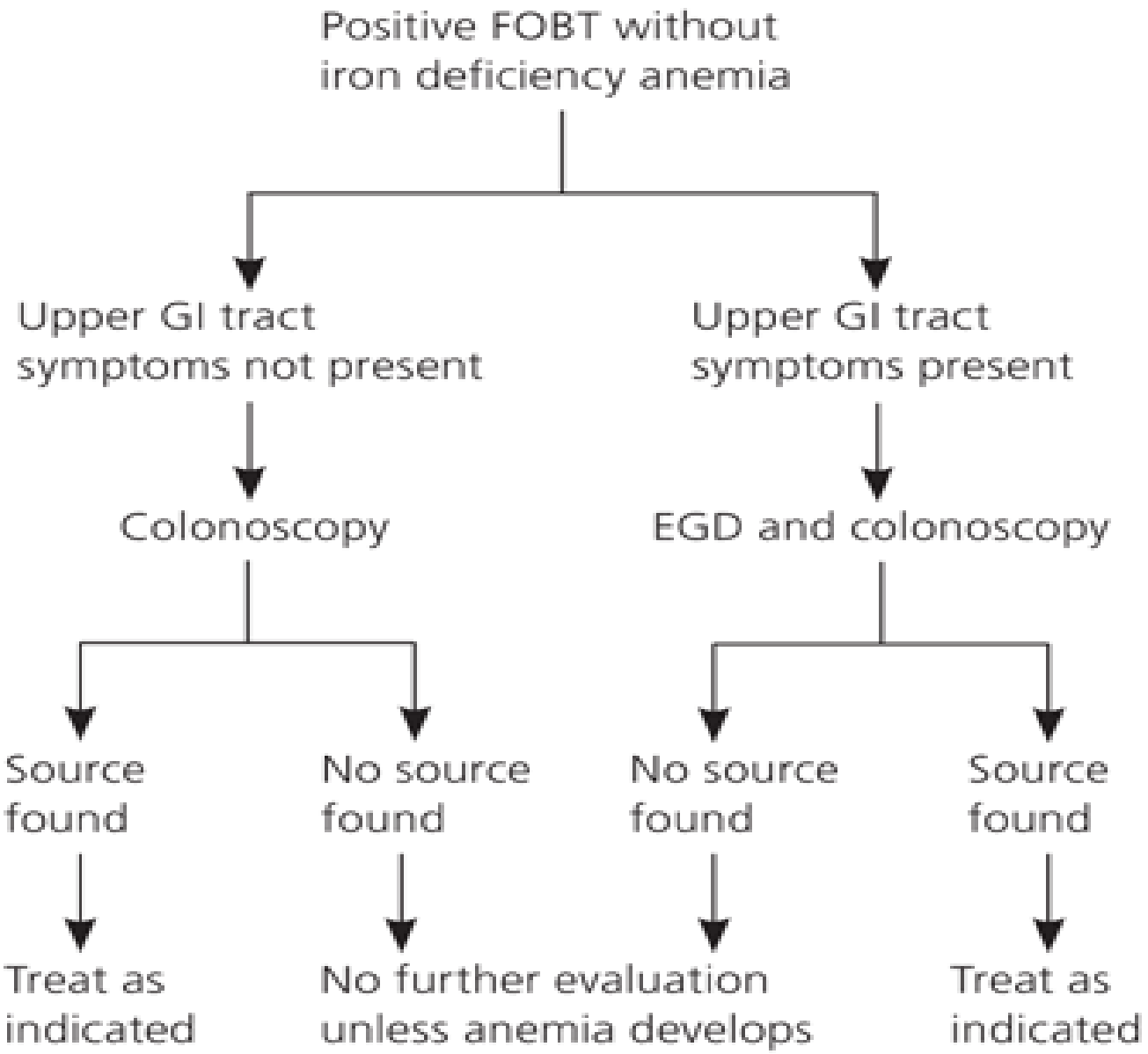
-Endoscopic finding (active , spurting - haemorrhage from peptic ulcer)

-Recurrent bleeding .

Occult Gastrointestinal Bleeding

- a positive fecal occult blood test, or iron deficiency anemia with or without a positive fecal occult blood test.
- Evaluation:-
- Esophagogastroduodenoscopy (EGD) and colonoscopy to find the bleeding source
- It may be repeated if there is recurrent bleeding as missed lesions detected in 35 %of those who had negative initial findings.

- If a cause is not found , capsule endoscopy is helpfull in reaches into the mid and distal small bowel .
- **causes**:-
- Angiodysplasia
- Celiac disease
- Duodenal ulcer
- Esophagitis
- Gastric cancer
- Gastric ulcer
- Gastritis


Positive FOBT without iron deficiency anemia
Upper GI tract symptoms not present
Upper GI tract symptoms present
Colonoscopy
EGD and colonoscopy
Source found
No source found
No source found
Source found
Treat as indicated
No further evaluation unless anemia develops
Treat as indicated

summary

- Obtain a good history to identify potential sources of the upper GI bleed and assess the severity of the bleed
- Exam and diagnostic data should focus on signs that indicate the severity of blood loss, help localize the source of the bleeding, and suggest complications (ie perforation)
- Emergent management includes ABCs, two large caliber IVs, fluid resuscitation, possible transfusion
- All patients should be treated initially with PPI. If you suspect variceal bleed, add somatostatin analogue and empiric antibiotics
- Triage appropriately to ICU vs Wards, and contact GI immediately

Thank you