GI BLEEDING

Dr David Schaevitz, MD


WARNING
Disturbing Content!
Viewer Discretion is Advised

THE 3DS

- Danger
- Distress
- Disposition

OR...

DISTRESS? VARIES FROM PERSON TO PERSON

DISPOSITION… WE'LL GET THERE

LOCATING THE BLEED CAN BE CHALLENGING

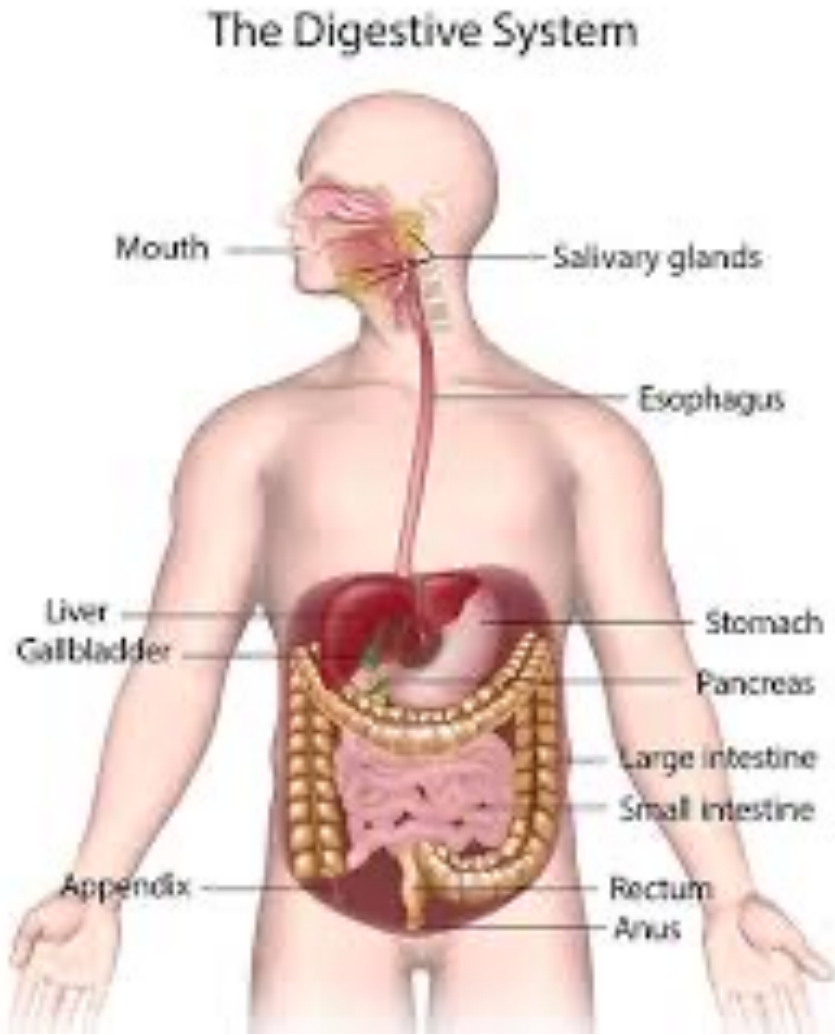

Table 1. Potential Causes of GI Bleed by Location

Upper GI Bleed

- Duodenal ulcer*
- Gastric ulcer
- Gastritis
- Esophagitis
- Gastroesophageal varices
- Mallory-Weiss tear
- Aortoenteric fistula
- Malignancy

*Bleeding peptic ulcers (gastric and duodenal) are the most common etiology in patients presenting with acute upper gastrointestinal bleeding (UGIB) and is strongly associated with H. pylori infection.

Lower GI Bleed

- Malignancy
- Diverticulosis
- Colitis (due to infection, ischemia, inflammatory bowel disease)
- Anorectal disease (hemorrhoids, fissures)
- Angiodysplasia
- Meckel's diverticulum

CDEM
Clerkship Directors in Emergency Medicine

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- **Epistaxis**

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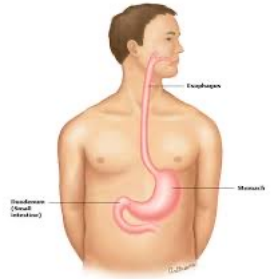
EPIDEMIOLOGY OF UPPER GI BLEEDS

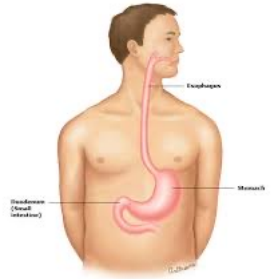


- 37 to 172 cases per 100,000 adults per year worldwide
- higher incidences among men and the elderly, >60 y of age (high risk in cirrhotics, large ulcers)
- overall UGIB mortality rate about 10%-14% based on studies from the U.S., Europe, and Asia

EPIDEMIOLOGY OF LOWER GI BLEEDS

- LGIB in the U.S. occurs in approximately 20-35 per 100,000 adults per year
- mortality rate of approximately 2%-5%
- LGIB is more common in female and elderly patients
- Clinical factors predictive of severe LGIB include aspirin use, comorbid illnesses, pulse >100 beats per minute, and systolic blood pressure <115 mm Hg
- The mortality predictors of LGIB cases include advanced age, hemodynamic instability, intestinal ischemia, comorbidities, coagulation defects, transfusion of PRBCs, and male gender

EPIDEMIOLOGY OF UPPER GI BLEEDS



- Decreased UGIB incidence (PPIs, eradication of H. Pylori, decreased NSAID use)

- Stable in hospital Mortality

CLINICAL PRESENTATION

- CC: GI BLEEDING

Sick or NOT sick?

OBS:

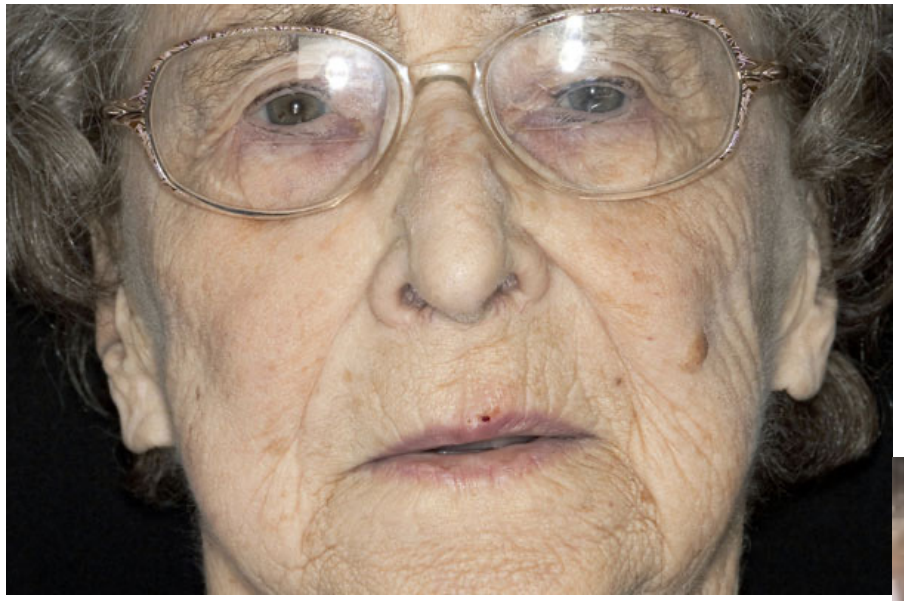
- HR 103
- BP 92/60
- Temp 36.5
- RR 20
- O2 Sat 98%

EARLY INTERVENTIONS IN GIB

Moderate to High risk – management in the ED/ADU

- IV dual access
- Coag screen, U&E, LFT, G&H, FBC
- Hourly observations (P, R, BP) more frequently if clinically appropriate
- IV saline resuscitation if Pulse > 100 or systolic BP < 100

WHAT DO YOU SEE, SMELL AND HEAR?



FIRST FORK IN THE ROAD

WHERE DOES THIS PATIENT NEED TO BE?

- Resus?
- Monitored bed?
- Unmonitored?
- Waiting room/Acute Care?

HELP FROM OUR GUIDELINES...

Waitemata District Health Board

Best Care for Everyone

Surgical & Ambulatory
General Surgery

Lower GI Bleeding

Abdominal Pain Blood Profile (ED & ADU)

Initial assessment

- Assess age, pattern of blood loss and colour, pain, history Upper GI disease, fainting, collapse, multiple bleeding episodes, recent biopsy or polypectomy, use of anticoagulants / NSAIDS
- History of liver disease, co-morbidities
- Assess vital signs
- Abdominal and PR exam plus rigid sigmoidoscopy
- ***NB** abdominal x-ray and CT abdomen / pelvis are **not required unless clinically indicated***
- **Low risk** if bleeding bright (scarlet) colour, evident on wiping / in toilet bowel, repeated, associated with prolapse of haemorrhoid and no change in bowel habit, no haemodynamic instability and bleeding ceased.
- **Otherwise Moderate to High risk**

HISTORY. HIGH YIELD QUESTIONS.

- # of episodes
- Comorbidities (i.e. ulcer disease, varices, cirrhosis, diverticulosis, IBD, alcoholism)
- Anticoagulation/NSAID use
- Pain
- Recent instrumentation/polyp removal
- History of AAA repair

PICTURES CAN HELP

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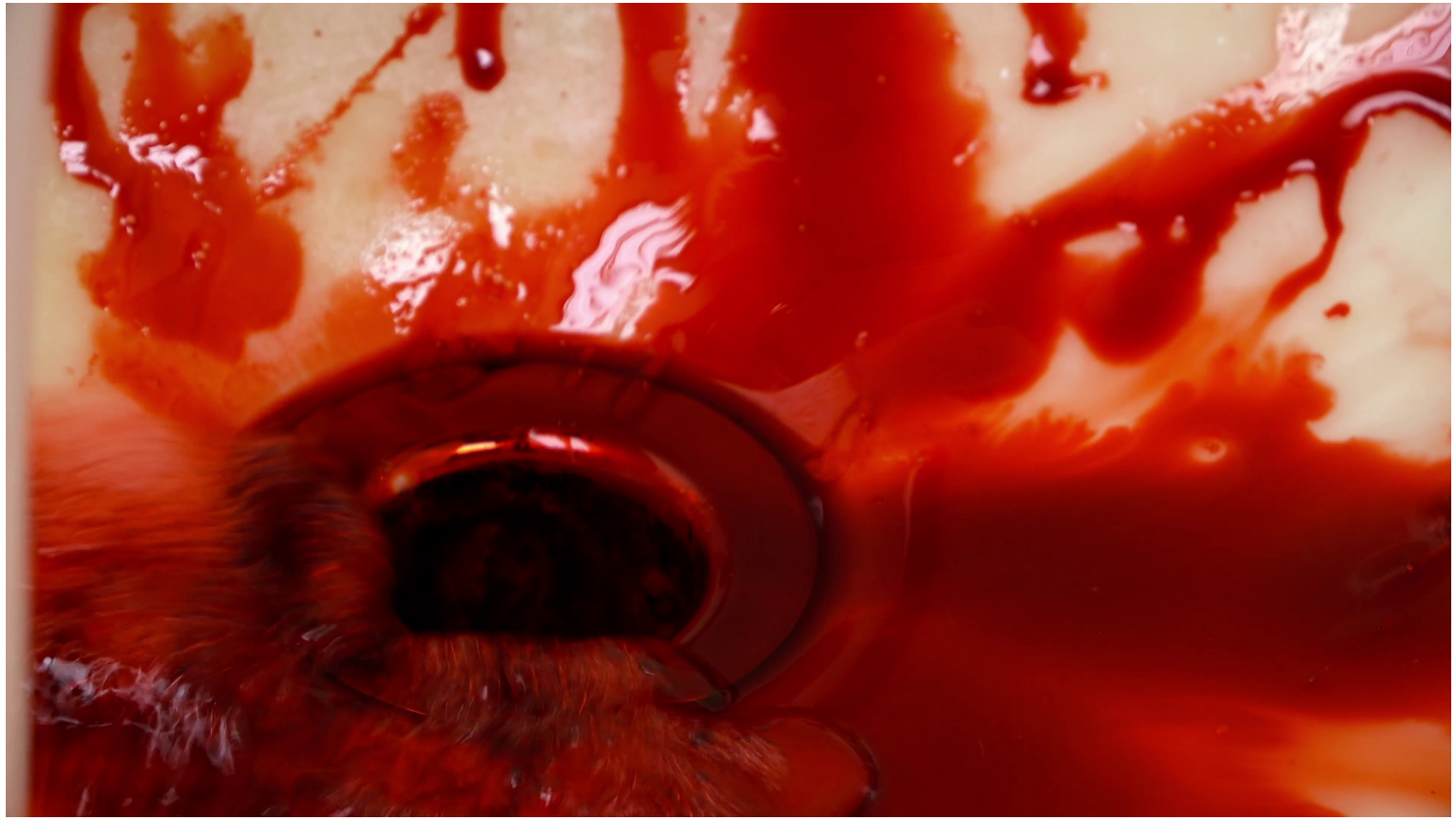
”coffee ground emesis”
-Typically Non Variceal

PICTURES CAN HELP



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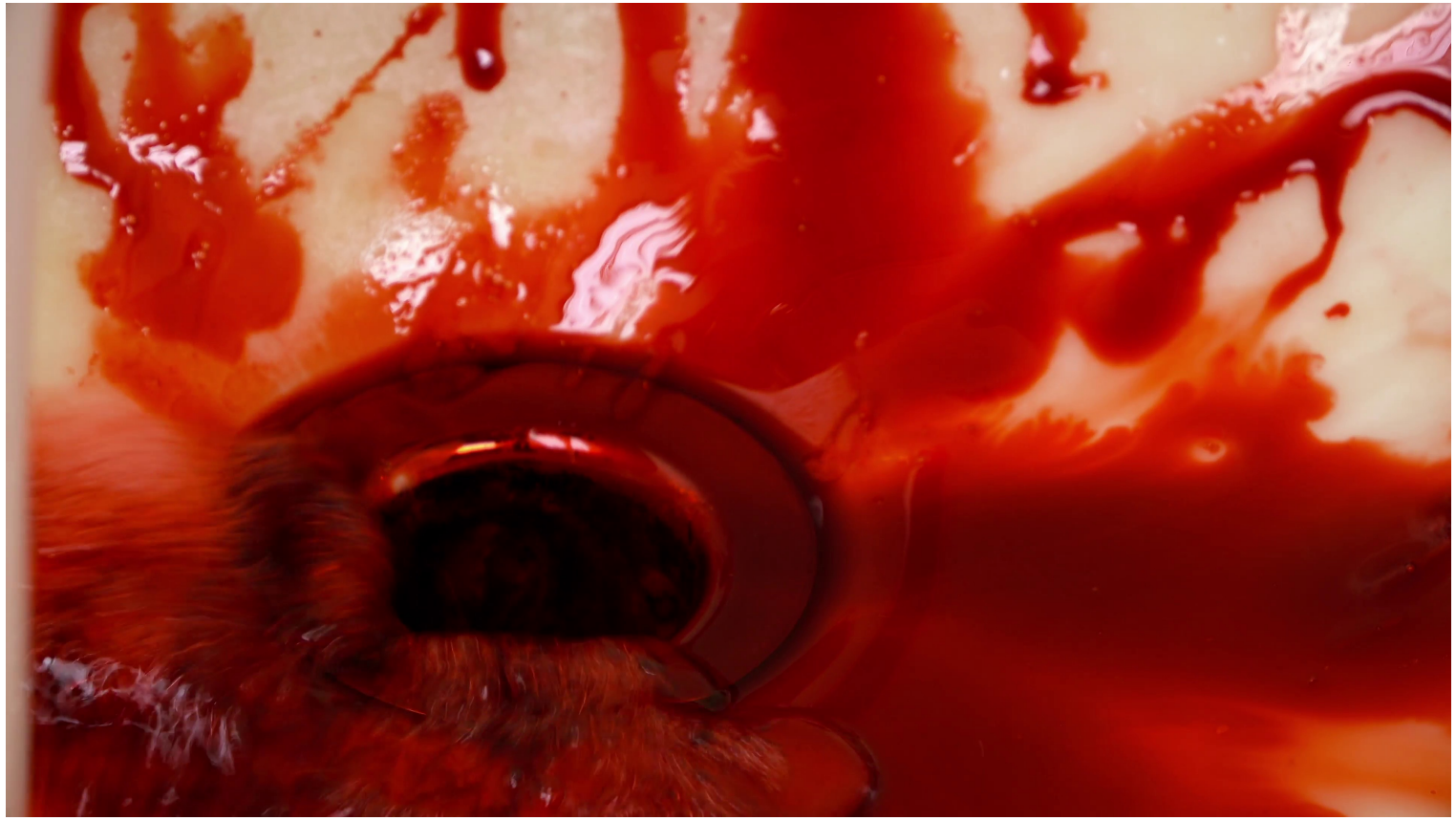

Bright red blood with clots. Faster bleeding source, i.e. variceal.

PICTURES CAN HELP

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BEETS/DRAGONFRUIT

PICTURES CAN HELP

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MELENA

Higher source of bleeding. Partially digested giving its characteristic look and smell.

PICTURES CAN HELP

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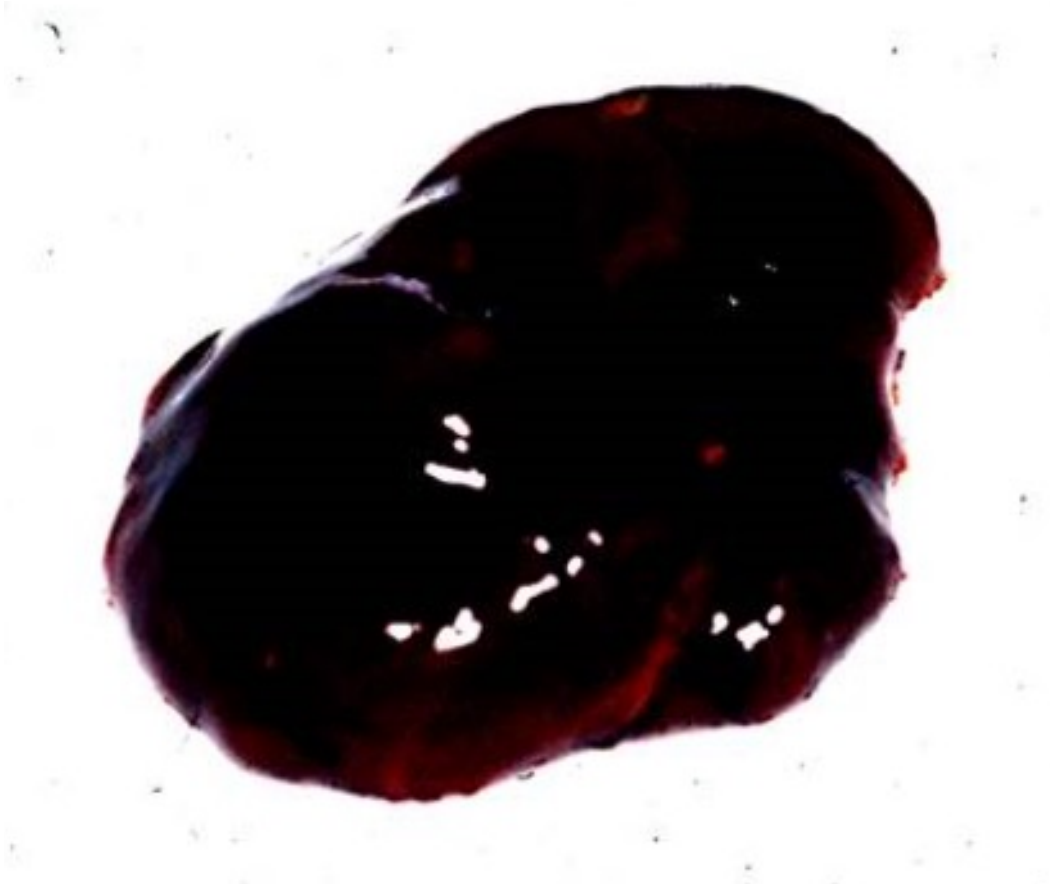
HAEMORRHOID BLEED

PICTURES CAN HELP



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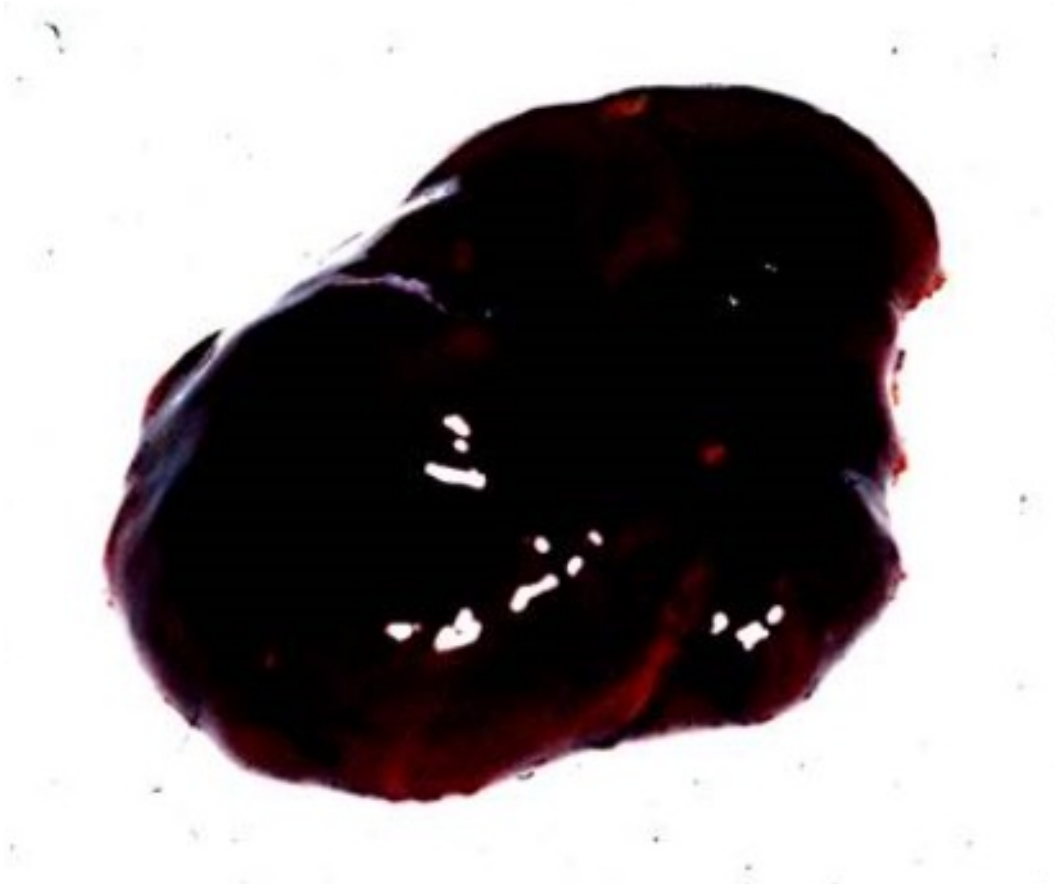
HAEMATOCHEZIA



More commonly associated with a more distal source, i.e. diverticulosis.

ETOMOLOGY

MELENA

”melas” Greek for black. Also the route for “melanoma.”

HAEMATOCHEZIA

haemato – blood chezia - defecation

CASE

- 42 y/o female presents with bright red blood on toilet tissue after opening her bowels. She states she has been struggling with constipation lately and needing to push hard to expel small, pellet like stools.

- She has this toilet tissue with her.

- What are 2 possible diagnoses?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REVISITING GUIDELINES...

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General Surgery

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PER THE LOWER GI BLEED PATHWAY

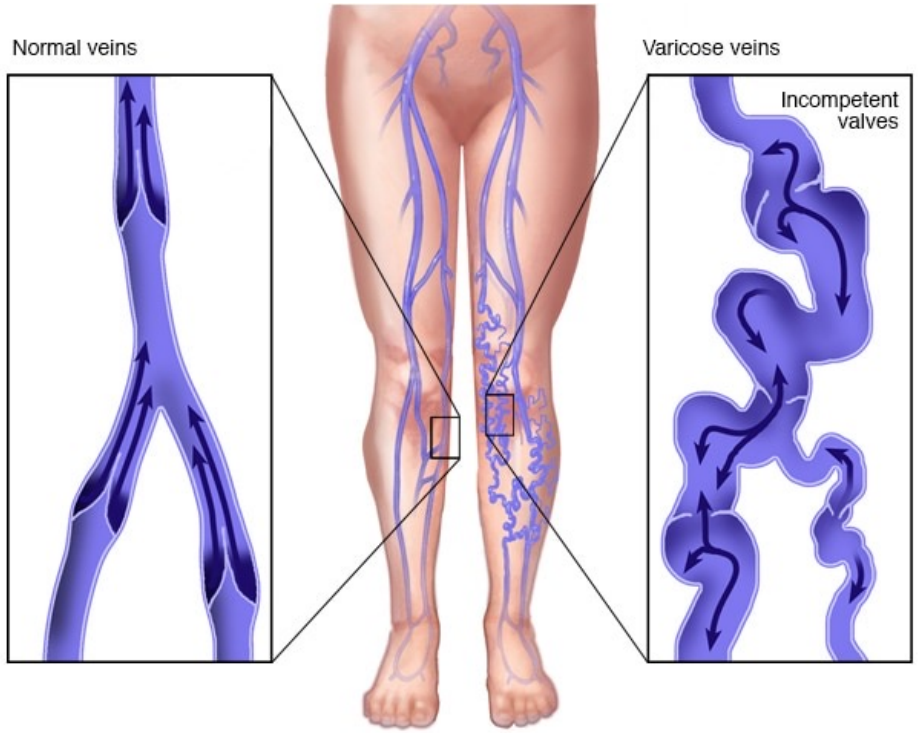
Low risk

- No admission is required
- Discharge home with referral to outpatient clinic as per GP (Most likely haemorrhoidal)
- Definitive treatment – discharge to GP

We can probably do something…. Any ideas?

HAEMORRHOIDS

- Varicose veins: superficial veins that have become enlarged and twisted
- Varus:
  - "bow legged" "bent outward"



ETIOLOGY

- Connective tissue deterioration
- Hypertrophy/increased anal sphincter tone
- Intra-abdominal pressure

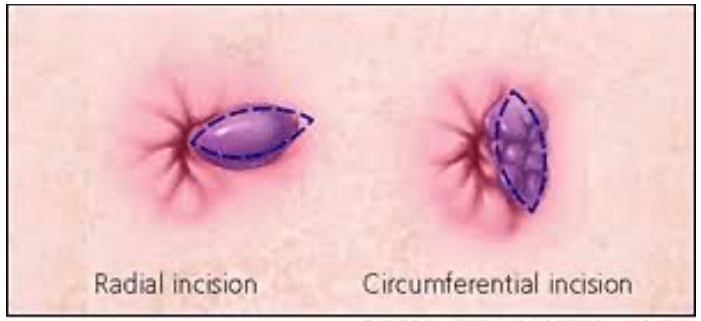
INCREASED SYMPTOMATOLOGY

- Age
- Pregnancy
- Diarrhoea
- Prolonged sitting
- anticoagulation

HAEMORRHOID TREATMENT

- The WASH regimen
  - **W**arm water
  - **A**nalgesics (2% lidocaine jelly)
  - **S**tool softeners
  - **H**igh-fiber diet (fiber supplements) can provide relief from non-thrombosed external hemorrhoids.

HAEMORRHOID INCISION

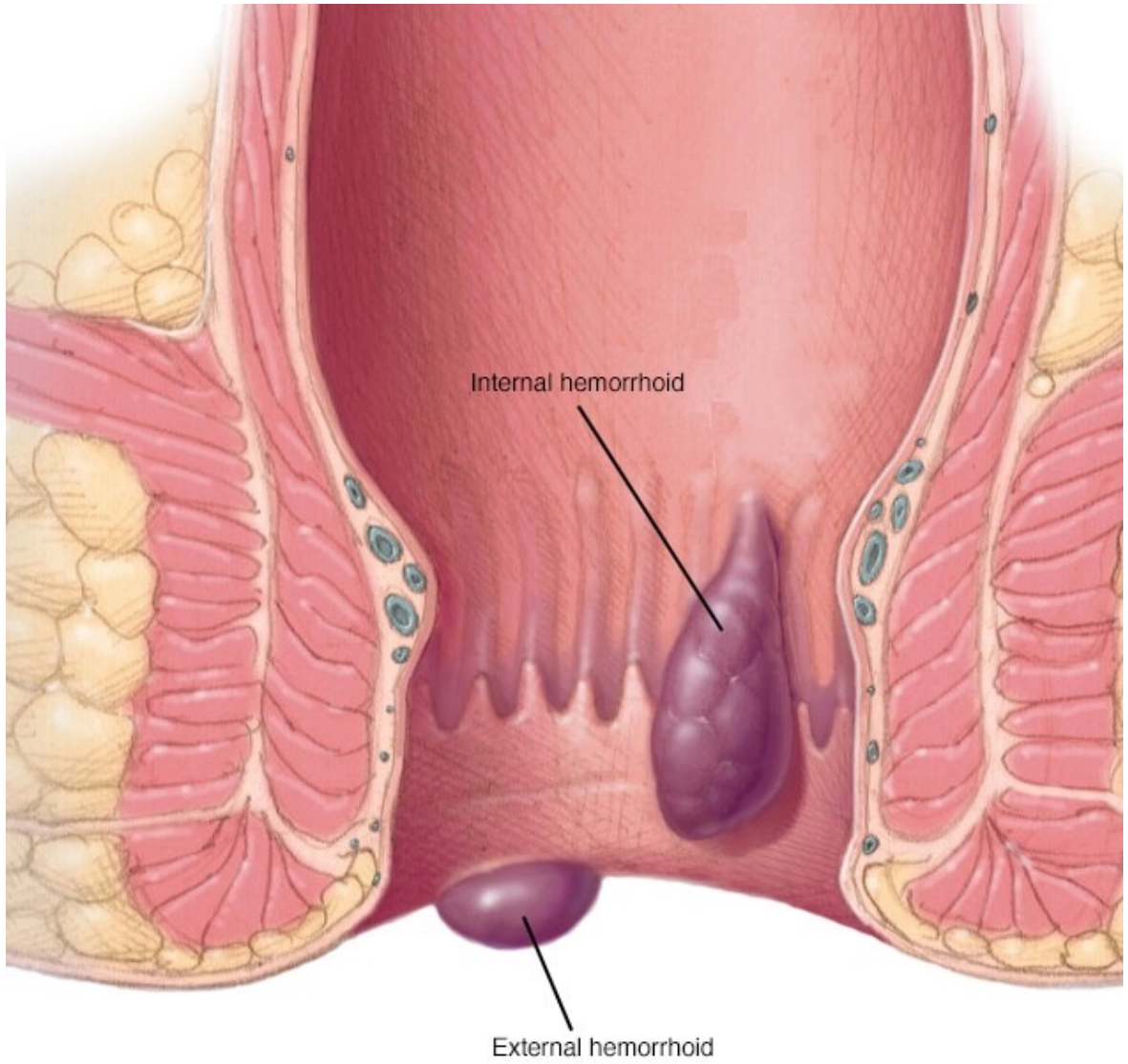


- Patients with acutely thrombosed hemorrhoids benefit from an elliptical incision and clot removal.
- Incising a subacute hemorrhoid is not recommended. Patients with subacute thrombosis (3-14 days after onset) should receive symptom relief with steroid cream.

HAEMORRHOIDS IN PREGNANCY

- Common
- Especially in 3rd trimester
- Dietary modification (i.e. fiber supplementation) is the recommended treatment
- Can resolve/improve with birth

EXTERNAL AND INTERNAL EXAMS



ANAL FISSURES: BACKGROUND

- Tear in the "anoderm"
- Chronic fissures seen in up to 40% of patients
- Most common anorectal problem encountered in paeds
  - Equal incidence among males and females

ANAL FISSURES H&P

- Rectal pain/bleeding often worsened with defecation
- Preceding local trauma
  - Vaginal delivery, diarrhoea, constipation, receptive anal intercourse
- Posterior midline location accounts for 90% of fissures
  - Thought to be related to poor blood flow and increased pressure to this area

ANAL FISSURE TREATMENT

- Supportive measures, including stool softeners, fiber supplements, sitz baths, and topical analgesics (eg, lidocaine 2% jelly), are the mainstays of treatment.
  - WASH
  - Topical vasodilators, such as diltiazem gel 2% or nifedipine 0.2%-0.5%, can be applied 2-4× per day for 4-6 weeks to promote sphincter relaxation and blood flow, thus expediting the healing process.

LATERAL FISSURES

- Red flag
- Can be a sign of other disease such as HIV, Crohn's

CASE

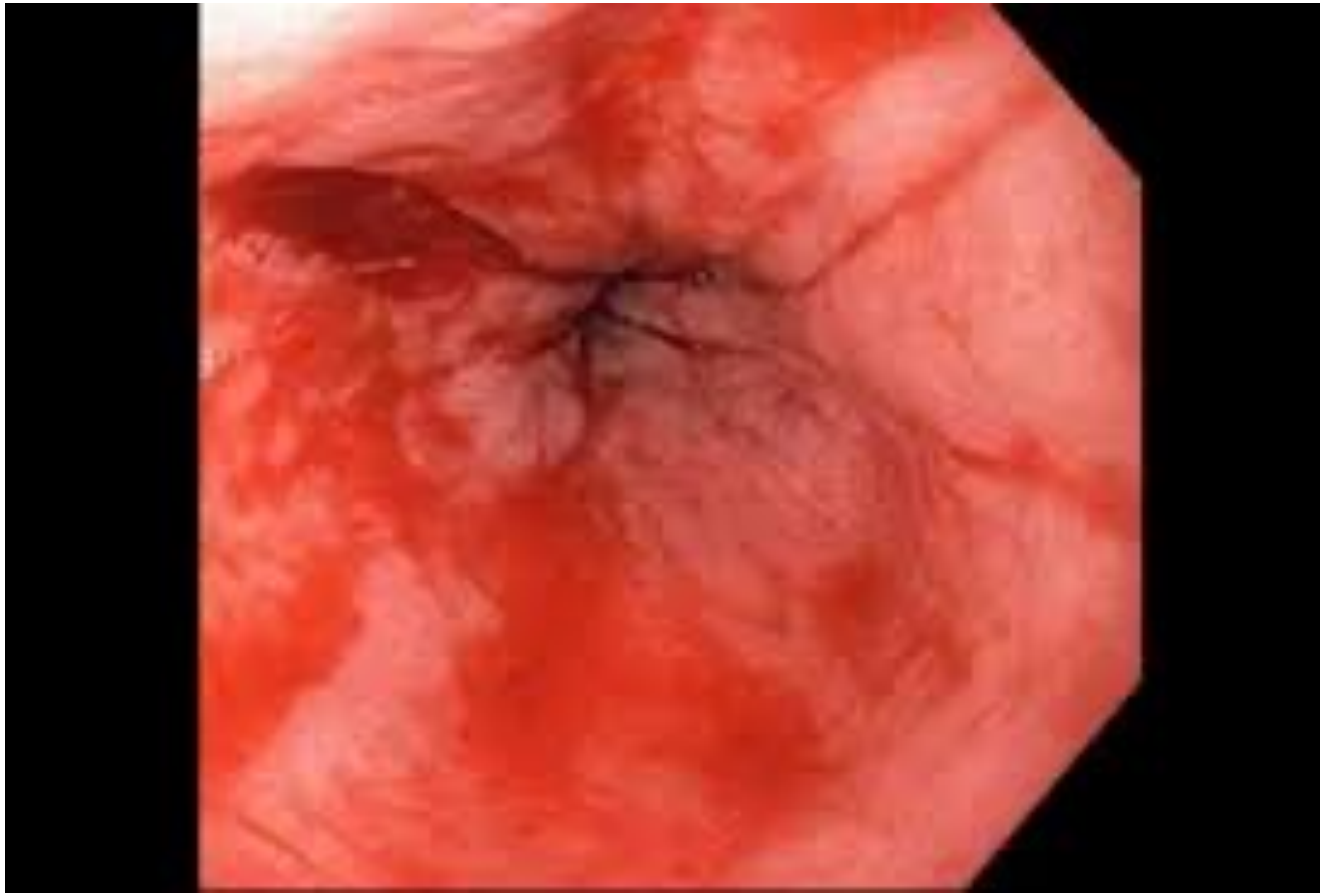
- 24 y/o female with 2 days of d's and v's presents with "specs" of bright red blood as well as several small blood streaks in her last vomitus, which was "forceful."

H&P

- Other family members with similar illness
- Stool is brown and without any noticeable blood.
- Pt drinks socially.
- No history of gerd.
- Intermittent, crampy epigastric and luq abdo pain
- Normal obs
- Benign abdomen on physical exam

DIAGNOSIS?

MALLORY WEISS TEAR



MD+CALC

Dispo?

Glasgow-Blatchford Bleeding Score (GBS)

Stratifies upper GI bleeding patients who are “low-risk” and candidates for outpatient management.

When to Use | Pearls/Pitfalls | Why Use

Hemoglobin	Norm: 120 - 170	g/L
BUN	Norm: 2.9 - 7.1	mmol/L
Initial systolic BP	Norm: 100 - 120	mm Hg
Sex	Female	Male
Heart rate ≥100	**No 0**	Yes +1
Melena present	**No 0**	Yes +1
Recent syncope	**No 0**	Yes +2
Hepatic disease history	**No 0**	Yes +2
Cardiac failure present	**No 0**	Yes +2

PER WDHB UPPER GI BLEED GUIDELINE

Calculate the Blatchford score via Éclair. Is the Blatchford score 0 and patient stable with no other concerns?

☐ No → send e-referral for inpatient OGD

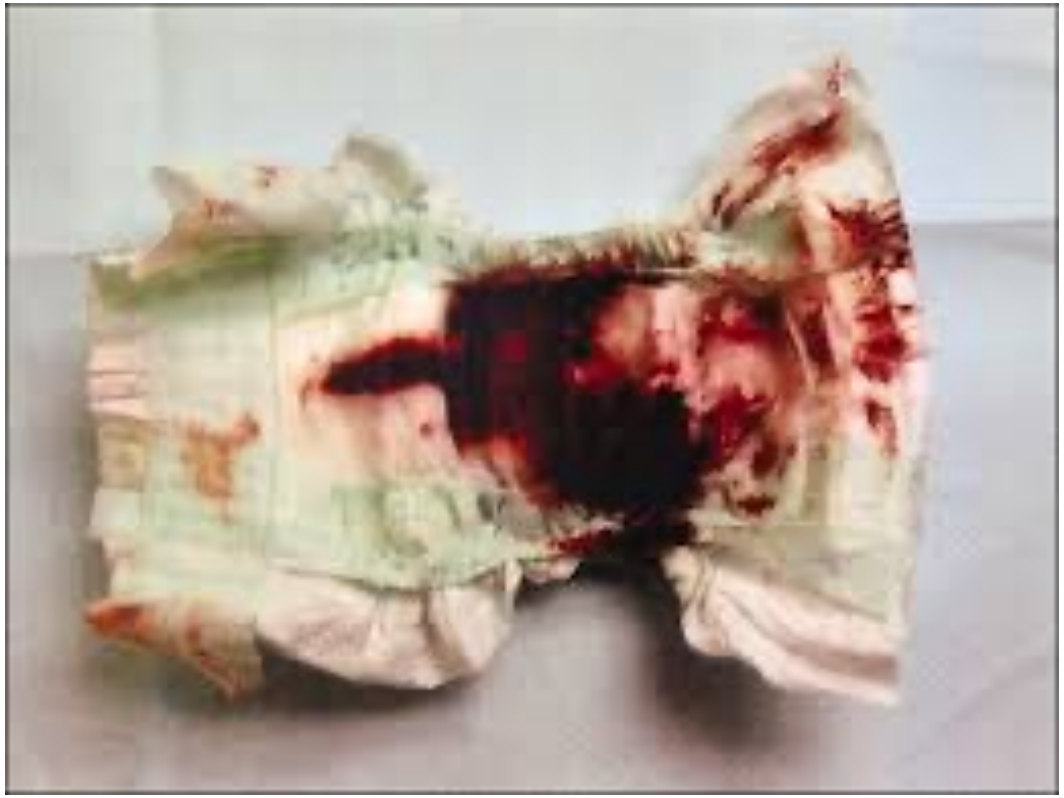
☐ Yes → Same day discharge
OP OGD referral if necessary
Patients at WTH, to stay at WTH

- Symptomatic treatment
  - Ondansetron
  - Omeprazole
  - Gaviscon
  - Pink lady

WHEN GLASGOW-BLATCHFORD SCORE +

- High risk!!
- Overall likely represents a sicker person
  - Higher risk of decompensation
  - Underlying varices or ulcer disease

GI BLEEDING IN CHILDREN



IS IT REALLY BLOOD?

IS THE BLOOD COMING FROM THE GI TRACT?

- Epistaxis
- Recent dental work
- Gingival bleeding
- Maternal blood from delivery
- Blood from breastfeeding. i.e. nipple fissure
- Throat or lung origin? Recent tonsillectomy, hematemesis
- Neonatal female hormonal withdrawal (GU bleeding)

Upper GI

(mouth to the ligament of Treitz, the 2nd part of the duodenum)

- Haematemesis (vomited blood)
  - Bright red suggests active bleeding
  - Altered blood - may be black (resembling coffee ground) suggests less active bleeding
- Upper GI blood loss may present as melaena

Haematemesis		
Oesophagus	Mallory-Weiss tear	Repeated vomiting
	Oesophageal varices	Stigmata of chronic liver disease or portal hypertension
	Oesophagitis	Reflux symptoms
	Foreign body	Including possible button battery ingestion
Stomach	H. pylori peptic ulcer	
	Non-helicobacter gastritis	Non steroidal anti-inflammatory use
Small intestine	H. pylori/peptic ulcer	
	Haemolytic uraemic syndrome	Elevated urea
	Henoch-Schoenlein purpura	Rash
	Arteriovenous malformation	Cutaneous A-V malformations
	Crohn's disease	Weight loss, diarrhoea
	Haemangioma	Cutaneous haemangiomata
	Intestinal necrosis	

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Rectal blood loss

Painless

< 3 months

- Swallowed maternal blood
- Vitamin K deficiency
- Allergic proctocolitis
- Gastritis
- Vascular malformation

3mths - 2yrs

- Mallory-Weiss tears
- Allergic proctocolitis
- Meckel's diverticulum
- Vascular malformation
- Polyps
- Haemophilia

> 2 years

- Polyps
- Mallory-Weiss tears
- Meckel's diverticulum
- Oesophageal varices

Painful

< 3 months

- Necrotising enterocolitis

3mths - 2yrs

- Anal fissure
- Oesphagitis
- Gastritis
- Peptic ulcer disease
- Intussusception
- Infectious colitis
- Inflammatory bowel disease
- Peptic ulcer

> 2 years

- Anal fissure
- Infectious colitis
- Peptic ulcer disease
- Oesphagitis
- Inflammatory bowel disease
- Henoch-Schonlein purpura
- Intussusception

RED FLAGS…

- Tachycardia is an important sign of hypovolaemia in paediatric patients with blood loss
- Hypotension is a late and ominous sign in GI bleeding

RECOGNIZE EARLY SIGNS OF THE SICK GI BLEEDER

- Early streaming to either a monitored bed or resus
- Early involvement of peds
- Get your charge nurse and consultants involved

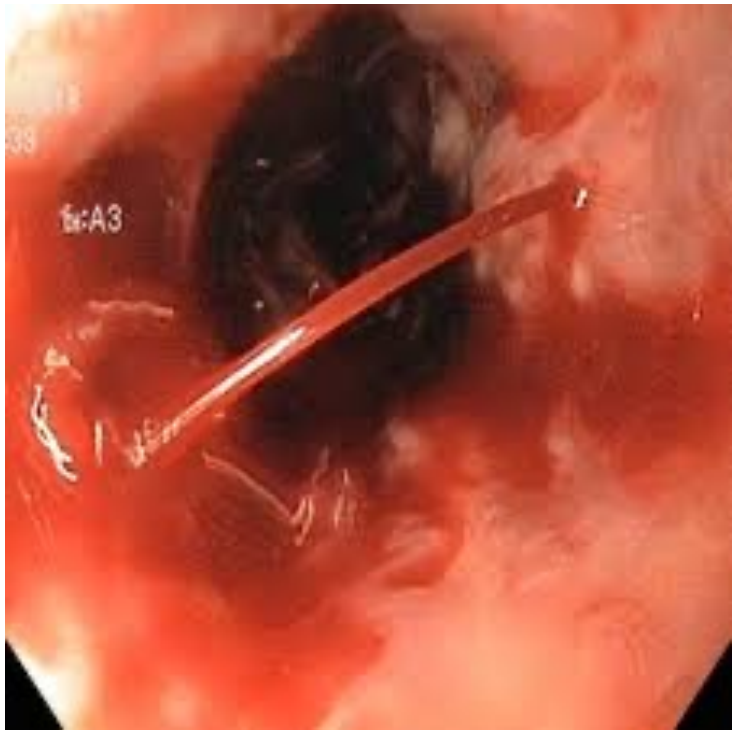
EARLY INTERVENTIONS IN GIB

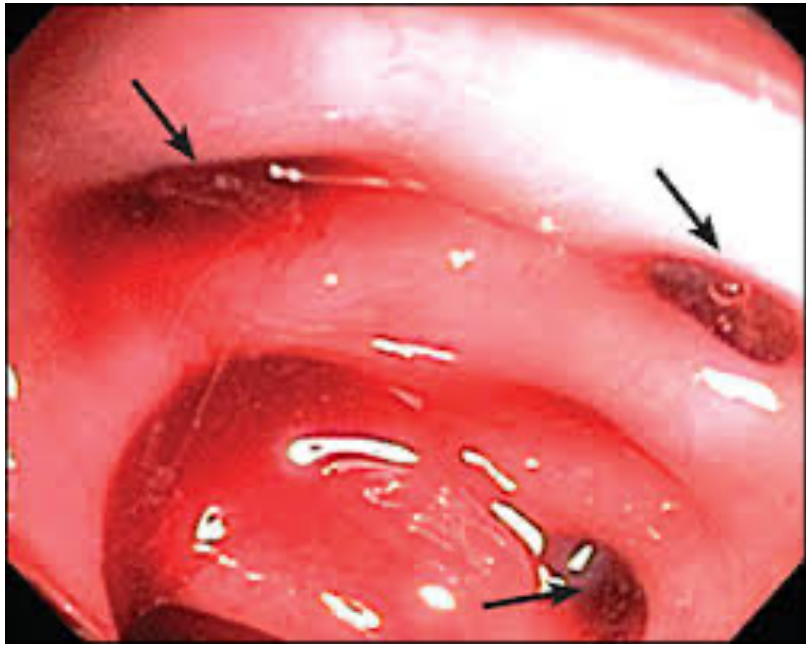
Moderate to High risk – management in the ED/ADU

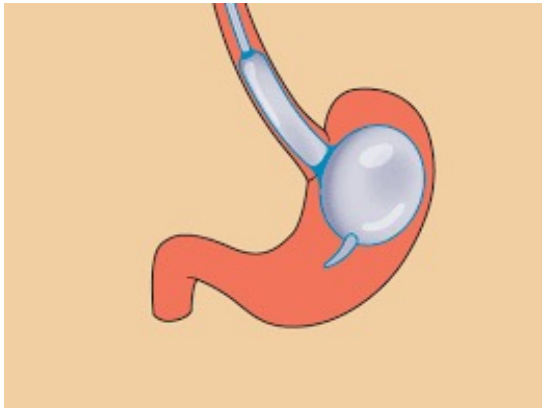
- IV dual access
- Coag screen, U&E, LFT, G&H, FBC
- Hourly observations (P, R, BP) more frequently if clinically appropriate
- IV saline resuscitation if Pulse > 100 or systolic BP < 100

SO MUCH MORE…

- Too much to cover in 1 hour







THANK YOU!!!!!

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