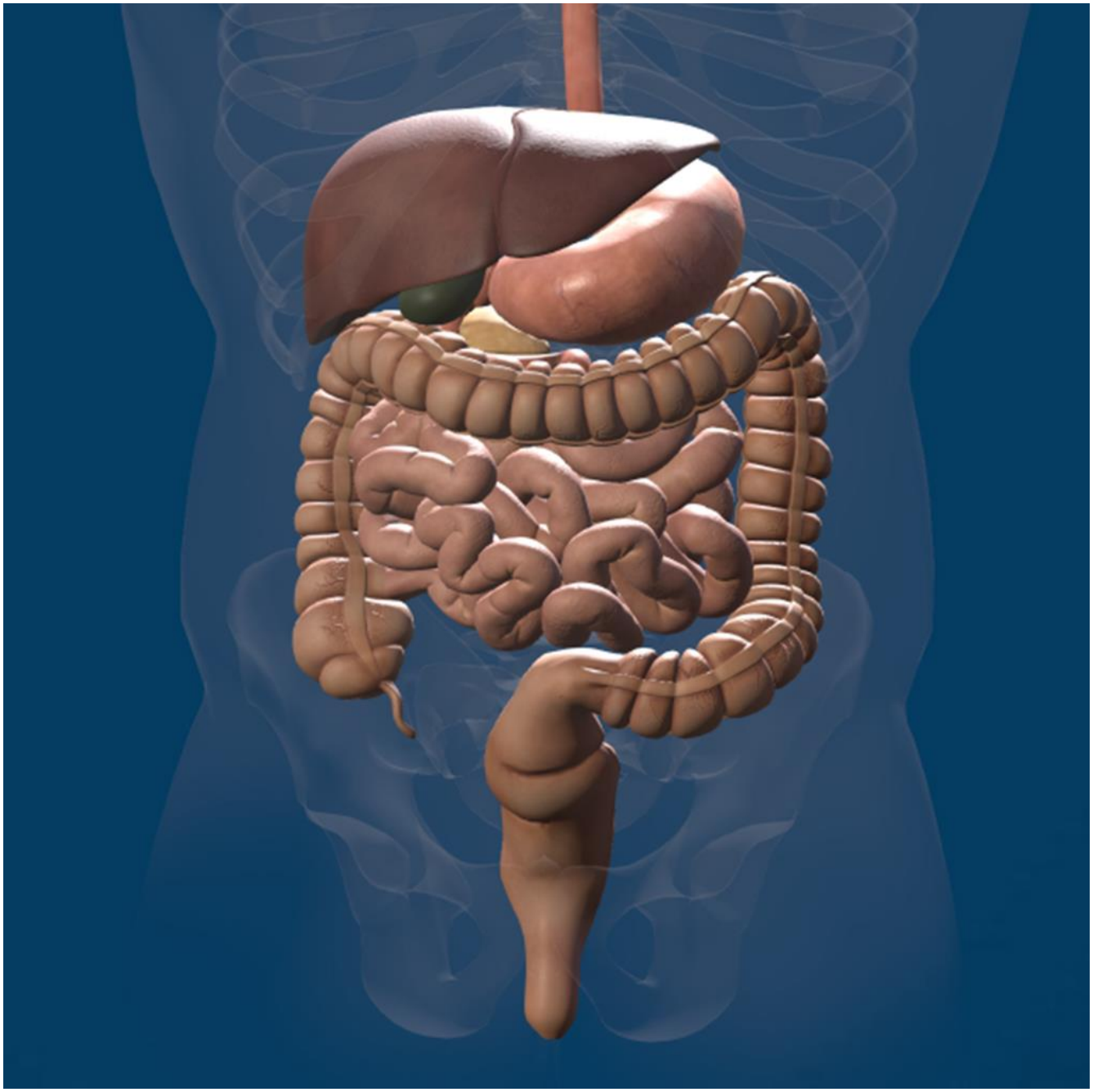
Ôn tập
Các vấn đề lâm sàng của Hệ tiêu hóa

Bộ môn Ngoại Tổng quát
ĐHYD TPHCM
2022



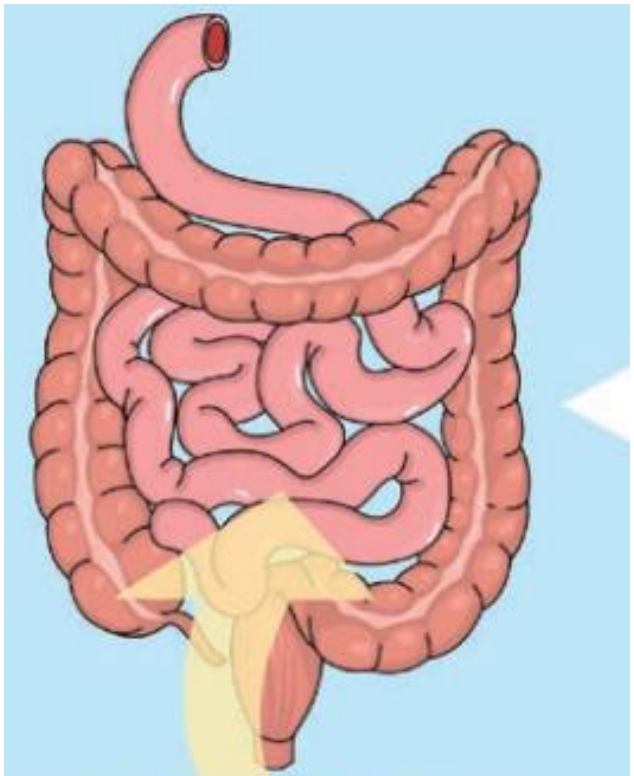
Vấn đề lâm sàng: Trướng bụng, tắc ruột

Quá trình bình thường

- Giải phẫu ống tiêu hóa
- Sinh lý vận động, bài tiết, hấp thu của ống tiêu hóa

Quá trình bệnh lý

- Phân tích được: triệu chứng LS,CLS
- Chẩn đoán được : nguyên nhân, vị trí, phân biệt
- Xử trí ban đầu
- Nguyên tắc điều trị



Etiology

- -Hernia (incarcerated)
- -Adhesions
- -Cancer
- -Intussusception
- -Volvulus
- -Crohn's disease
- -Radiation enteritis
- -Bezoars
- -Gallstone
- -External compression

Mechanical

Partial

Some passage of gas/fluid/fecal matter possible

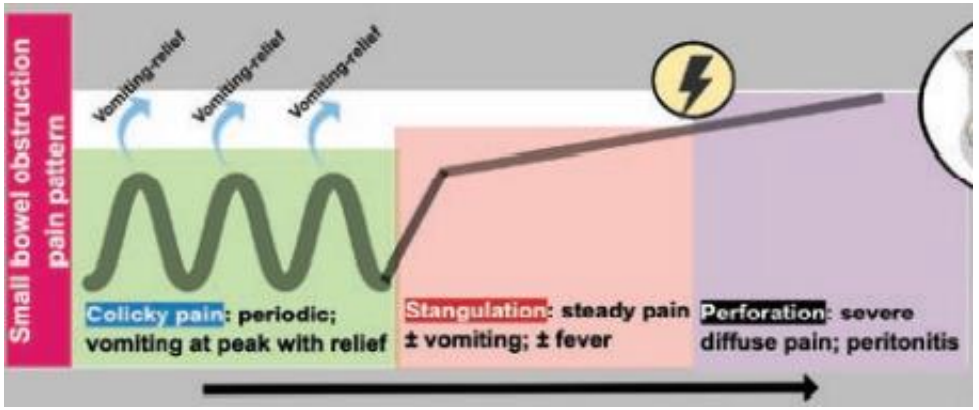
Complete

Total occlusion of bowel lumen; no passage of content

Paralytic

Ileus

No peristalsis; no mechanical obstruction



Small Bowel Obstruction: Evaluation, Treatment

Anxiety; diaphoresis; dehydration

LABS:

-May be normal initially
-None are pathognomonic for SBO
-Hyperemesis: hypchloremic/hypokalemic contraction alkalosis
-Increased WBC, lactate: suggestive of strangulation/necrosis

PAIN
The higher the obstruction, the more frequent the pain;

PAIN FREQUENCY
upper ileum: q 3-5 min
lower ileum: q 10-20 min

ABDOMINAL DISTENTION
The lower the obstruction, greater the distention

BOWEL SOUNDS
early: metallic
late: absent

TENDERNESS
mild diffuse tenderness with distention; severe localized tenderness with strangulation; severe diffuse tenderness with perforation/peritonitis

Always examine hernia orifices (umbilical, inguinal, femoral) for possible cause of bowel obstruction; additionally, examine previous surgical scars

Weak, rapid pulse

Cold extremities

Digital rectal exam: examine presence and quality of content; empty vault suggestive of complete

DIFFERENTIAL DIAGNOSIS
-Pancreatitis
-Appendicitis
-Cholecystitis
-Renal colic
-Biliary colic
-Ovarian torsion
-Mesenteric ischemia

Radiological Exams

Upright Chest

Rules out free intraperitoneal air

UPRIGHT ABDOMINAL

Air fluid levels in small bowel; no gas in rectum

Abdominal CT Scan

PO/IV/Rectal contrast; may determine transition point confirming partial/complete obstruction; may depict intraluminal/extraluminal cause of obstruction

Treatment

1
-ABC's
-Good IV access
-Hydration
-Correct electrolyte abnormalities
-Monitor urinary output

2
-Nasogastric decompression
-Determine if COMPLETE/INCOMPLETE obstruction
-DIAGNOSIS/PREVENTION OF STRANGULATION IMPORTANT
-Serial exams if obstruction incomplete

3

Resolution
-most case of incomplete obstuction will resolve with non-operative therapy

Surgery
-complete obstuction
-strangulation/pectonitis
-recurrent obstruction

Vấn đề lâm sàng: xuất huyết tiêu hóa

Quá trình bình thường

- Các mốc giải phẫu ống tiêu hóa
- Hoạt động bài tiết

Quá trình bệnh lý

- Chẩn đoán vị trí, mức độ, diễn tiến, nguyên nhân của XHTH trên, dưới (LS và CLS)
- Xử trí ban đầu
- Nguyên tắc điều trị
- Tiên lượng

Upper Gastrointestinal Bleeding

Manifestation

Etiologies

Mallory-Weiss Tear

Key history point: VOMITING/RETCHING

Oropharyngeal
Nasopharyngeal
Severe epistaxis

Esophageal Varices

Key history point: Cirrhosis/hepatitis/alcohol abuse

Peptic Ulcer Disease

Helicobacter Pylori
Aspirin
NSAIDS
Alcohol
Smoking

Key history point: ABDOMINALPAIN

Marginal Ulcer

Key history point: previous surgery (gastrectomy/gastric bypass)

Angiodysplasia

Diculafoy lesion

'Risky Drugs' History

Ulcerogenic/ulcerotropic: NSAIDS/COX-2 inhibitors

Bleeding promoters: Aspirin/clopidogrel/anticoagulants

Other associated drugs: SSRIs/Ca++ channel blockers/aldosterone antagonists

False Positive Melena: Iron/bismuth

Gastric cancer

Key history point: anorexia/weight loss/cachexia

Aorto-duodenal Fistula

Key history point: previous abdominal aortic aneurysm repair (usually open)

Labs

CBC/AST-ALT/bilirubin/albumin/PT-PTT
BUN/creatinine ratio>36:1
Urea/creatinine ratio>100:1
TYPE & CROSSMATCH

BLOOD LOSS

<15% blood volume: tachycardia
15-40% blood volume: orthostasis
>40% blood volume: supine hypotension

Initial Treatment: ABCs

INTUBATION:
-massive bleeding
-agitation
-respiratory distress
-aspiration risk

RESUSCITATION:
2 large-bore IVs
-crystalloid for MAP>65
-careful in heart failure/renal disease patients

TRANSFUSION:
-massive bleeding
-Hb<7mg/dl
-platelet tx when <50,000
-FFP when INR >2
-1U FFP q 4U PRBC

NASOGASTRIC TUBE:
-ISF
-diagnostic
-aspiration prevention
-lavage

Upper Gastrointestinal Bleeding

Treatment

NASOGASTRIC LAVAGE

Irrigation with room-temperature water...

...until contents are clear
-prepare for endoscopy

-absence of blood does not rule out UGIB
-bilious aspirate rules out UGIB

±

-may administer ERYTHROMYCIN (3mg/kg over 20 min) to help clear clots

IV PPIs:
ESOMEPRAZOLE
(80mg bolus; then 40mg IV q 12h)

VASOPRESSIN
-varices only

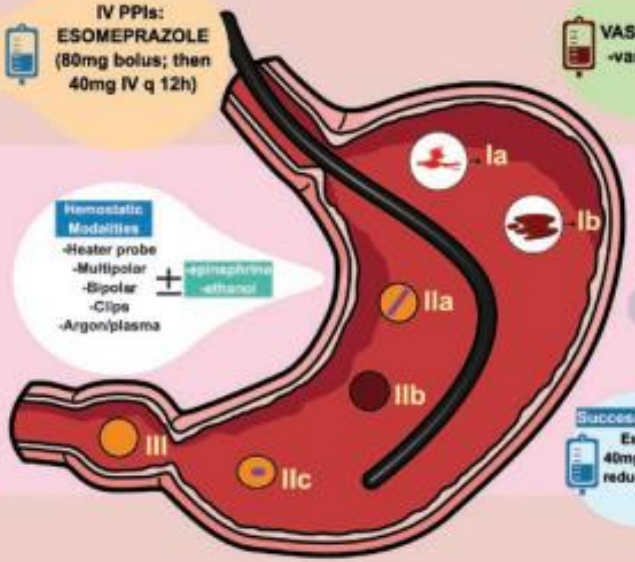
Endoscopy

Diagnostic & therapeutic modality of choice

Within 12-24h

Hemostatic Modalities
-Heater probe
-Multipolar
-Bipolar
-Clips
-Argon/plasma
± epinephrine, ethanol

No intervention:
-nonbleeding Mallory Weiss
-erosive gastritis
-clear ulcer base



Forrest Classification

Ia: spurting bleeder
Ib: oozing
IIa: non-bleeding visible vessel
IIb: adherent clot
IIc: flat-pigment spot
III: clear ulcer base

Successful HEMOSTASIS
Esomeprazole 40mg q 12h for 72h reduces rebleeding rates

LONG-TERM MEDS
-*H. Pylori* eradication
-Sucralfate
-H2-blockers
-Antacids

SELECTIVE ANGIOGRAPHY

Failure to identify or control bleeding endoscopically

ANGIOGRAPHIC EMBOLIZATION:
-PVC
-coils
-gelfoam
-glue

60-90% success rate

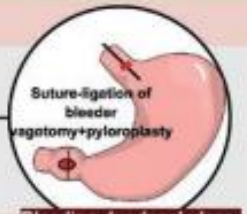
IV VASOPRESSIN
-50% rebleeding rate
-ineffective for gastroduodenal artery bleeds

SURGERY

Failure to identify or control bleeding endoscopically

Angiography unavailable

>6U PRBC Tx



Bleeding duodenal ulcer

Bleeding gastric ulcer

Lower Gastrointestinal Bleeding

Visible blood passed per rectum; usual source is distal to ligament of Treitz

Etiologies

USA: 1.7 million cases/year

Common cause of emergency admission

LGIB increases with age as etiologies also increase with age

Benign Anorectal Causes

Hemorrhoidal disease
Massive LGIB rare
Often a cause of iron-deficiency anemia

5-20%

Post Polypectomy

Occurs in < 1% of polypectomies but accounts for 8% of LGIB

<8%

HIV

Kaposi sarcoma
-STD

Infectious Colitis

-Campylobacter
-Salmonella
-Shigella
-E.Coli

Self-limiting bloody diarrhea

Radiation Colitis

Acute vs chronic; LGIB with tenesmus; pertinent history

LGIB usually painless; abdominal pain suggestive of ischemia, IBD

IBD

More common in ulcerative colitis

2-10%

Cirrhosis/Hepatic Failure

Rectal varices may form as a result of portosystemic shunt (IMV/superior rectal vein via middle rectal vein and inferior rectal vein) and may bleed; coagulopathy may exacerbate bleeding from hemorroids

Upper Gastrointestinal Source

10-15% of LGIB may have a source proximal to the ligament of Treitz:
-Gastroduodenal ulcers
-Esophageal varices
-Gastric varices
-Aortoduodenal fistula

10-15%

Diverticulosis

Most common cause of massive LGIB. Right colon most common origin(50-90%); predisposing factors: NSAIDs, HTN, anticoagulants

Bleeding is not associated with diverticulitis

80% Bleeding stops spontaneously in 80%; recurs in 40%

Arterial Bleeding

20-40%

Colorectal Cancer

Massive LGIB rare

Left side/rectum: bright red blood; right side: rarely with large bleeds: maroon, melena

<10%

Small bowel source: 5%

Angioectasia

Tortuous vascular abnormality of submucosa; also known as arteriovenous malformation/angiodysplasia; seen more frequently in von Willebrand disease/chronic renal failure/aortic stenosis

Risk factors for LGIB: Age, multiple lesions, antiplatelet drugs, anticoagulation

Cecum, right colon most common sites

Venous Bleeding

5-15%

Bright red blood

Maroon

Melena

Ischemic Colitis

Mucosal sloughing after reperfusion of ischemic segment of colon

Massive LGIB rare

Traditional watershed areas prone to ischemia: Griffith's (splenic flexure); Sudeck's (sigmoid)

Abdominal pain present

Griffith's

Sudeck's

6-18%

Lower gastrointestinal Bleeding

First Steps

Assess Hemodynamic Stability

Massive LGIB:
Orthostatic Hypotension
Chest pain
SOB

IV Access& Monitoring

2 large-bore IVs (16-18 gauge)

x 2

-Foley catheter
-Monitoring

Blood

0 negative

CBC
PT/PTT
Type & Crossmatch
O-negative transfusion if necessary

Exclude Upper GI Bleeding

Nasogastric lavage

Bilious aspirate excludes UGIB

Bloody aspirate: Upper Endoscopy

Clear aspirate: INDETERMINATE

Clinical Assessment

History

Medications:
-NSAIDS
-Antiplatelet drugs
-Anticoagulants

Stool Color

BRIGHT RED: anorectal, left colon

MAROON: right colon, small bowel, massive UGIB

MELENA: UGIB, low-grade small bowel, right colon

Onset, duration of bleeding, volume/frequency

Hypovolemia Assessment

TACHYCARDIA: moderate hypovolemia

ORTHOSTASIS: <15% blood loss

SUPINE HYPOTENSION: >40% blood loss

Exam

Abdominal pain; distension; hepatosplenomegaly; masses; scars

HEPATIC STIGMATA: jaundice, caput medusa, palmar erythema- VARICEAL BLEED?

DIGITAL RECTAL EXAM +anoscopy, proctosigmoidoscopy
Anorectal lesions

Diagnosis/ Treatment

Resuscitation/Transfusion

0.5-1lt crystalloid bolus; check BP

Transfusion threshold Hb:
-Young patients: 7 g/dl
-Older patients: 9 g/dl

BETTER OUTCOMES in UGIB when lower transfusion thresholds used

INR

1.5-2.5: can perform endoscopic hemostasis BEFORE reversal

>2.5: REVERSAL with FFP

LGIB+abdominal pain: CT scan

Colonoscopy

-Source identification in 74-100%
-Can be therapeutic
-NG lavage with 4-6lt PEG
-Blood is cathartic

HEMOSTATIC INTERVENTIONS:
-Clips
-Epinephrine
-Monopolar/bipolar current
-Argon/plasma

Angiostasias: argon/plasma; laser;
REBLEEDING: 0-40%

Radionuclide Imaging

BLEEDING RATE: 0.04-0.1 ml/min

Patient's red cells are tagged with isotope, then injected into patient; images obtained over 30-90 min, and every few hours for up to 24h; may be positive METACHRONOUSLY

99mTc → 30 min

-27% rebleeding rate after initial negative scan
-Repeat scanning possible
-Varied accuracy rates (24-91%)
-SHOWS GENERALIZED AREA OF BLEED (eg. small bowel/left colon/right colon)
-Blood may move in GI tract, lowering precision of bleeding localization

Positive scan used as a prerequisite for angiography

CT Angiography

BLEEDING RATE: 0.3-1 ml/min

-Detects active bleeding; precise localization with demonstration of co-existing pathology (eg. tumor)
-Sensitivity 85-92%

Renal injury; radiation exposure; allergic reaction; non-therapeutic

Small Bowel Bleed

Negative upper/lower bleed evaluation

-Video Capsule Endoscopy: not for massive bleeds
-Double balloon endoscopy
-Intraopertive enteroscopy
Meckel scan/99mTc: uptake in ectopic gastric mucosa in a Meckel's diverticulum

Angiography

BLEEDING RATE: 0.5-1 ml/min

Indications: hemodynamic instability; transfusion>3U PRBC; Hb drop>50%
Image SMA first; then IMA; then celiac artery
"Provocative angiography" in recurrent/intermittent/elusive bleeds;
heparin/thrombolytics/vasodilators used

Therapeutic Angiography

VASOPRESSIN infusion: 0.2U/min; 90% bleeds stop; 20% rebleed rate

SUPERSELECTIVE EMBOLIZATION: coils/gelfoam/PVC; feasible in 80%; 90% success rate

Intestinal infarction; renal injury; pseudoaneurysm; vascular injury

Surgery

INDICATIONS: massive transfusion requirements; hemodynamic instability despite efforts; ideally with LOCALIZED source/unsuccessful therapeutic attempts

ACTIONS:
-Explore small bowel/rule out Meckel's
-Transilluminate bowel/angioectasia
-intraoperative colonoscopy/enteroscopy
-IF NO SOURCE FOUND: total abdominal colectomy+ileostomy/ileorectostomy
5% rebleed
-Blind segmental resection: [redacted]
rebleed

Esophageal Variceal Bleeding

Major cause of morbidity and mortality (30-50%) in patients with cirrhosis

Goals:

Restore & maintain hemodynamic stability → Restore & maintain oxygenation → Control bleeding → Prevent complications

Initial Treatment

Admit to ICU; ABC's; intubation to protect airway/prevent aspiration

Vigorous fluid resuscitation; blood tx; recombinant factor VIIa

Vasoactive drugs: octreotide 25-50µg/h; vasopressin 0.4U bolus; then 0.4-1U/min ± nitroglycerin; terlipressin 2mg IVq4h; then down to 1 mg IVq6h

! Hyponatremia/ischemia

Antibiotics: Ciprofloxacin 500mg BID for 7 days; ceftriaxone 1g qD for seven days; reduction in rebleeding/ infection/mortality rates

Endoscopy within 12h; Non-variceal bleeding source in 25% (eg Mallory-Weiss tear)

Bleeding Control

Endoscopic banding: more effective than sclerotherapy; can be repeated q 1-2 weeks until eradication of varices

Balloon tamponade: 80-90% temporary bleeding control rate; 60% re-bleeding rate; PERFORATION /ASPIRATION RISK

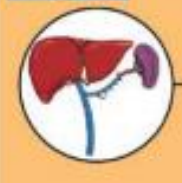
Self-expanding metal stents: alternative to balloon tamponade for refractory bleeding; 97% bleeding control rate; MIGRATION/ULCERATION

Transjugular Intrahepatic Portosystemic Shunt (TIPS)

Child-Pugh B/C SELECTIVELY; Score>13 HIGH MORTALITY

Has replaced emergency surgery for refractory variceal bleeding; 90-100% hemostasis rate; embolization of feeding esopageal vein possible; 12-20% recurrent bleeding

Surgery



Shunt Procedures

Nonselective portacaval shunts; small-diameter H-graft portacaval shunts; mesocaval shunts; selective shunts/distal splenorenal shunts:
AVOID SHUNTS IN LIVER TRANSPLANT CANDIDATES

EMERGENCY SURGERY

Esophageal transection, proximal gastric devascularization, splenectomy; alternatively, central portacaval shunt

Liver Transplantation

Ultimately, liver transplantation is the optimal surgical procedure for Child-Pugh C patients; Child-Pugh A/B treated with endoscopic banding until hepatic function deteriorates further

Gastric Varices

-Vasoactive drugs (octreotide/vasopressin/terlipresin)
-Balloon tamponade
-Cyanoacrylate glue injection
- TIPS
-Banding
-Balloon-occluded retrograde transvenous obliteration (BRTO)

Child-Pugh Score

POINTS	1	2	3
Ascites	absent	slight	moderate
Bilirubin	<2mg/dl	2-3mg/dl	>3mg/dl
Albumin	>3.5 mg/dl	2.8-3.5 mg/dl	<2.8 mg/dl
INR	<1.7	1.7-2.3	>2.3
Encephalopathy	none	Grade 1-2	Grade 3-4

Child-Pugh A: 5-6 (compensated)
Child-Pugh B: 7-9 (compromised)
Child-Pugh C: 10-15 (decompensated)

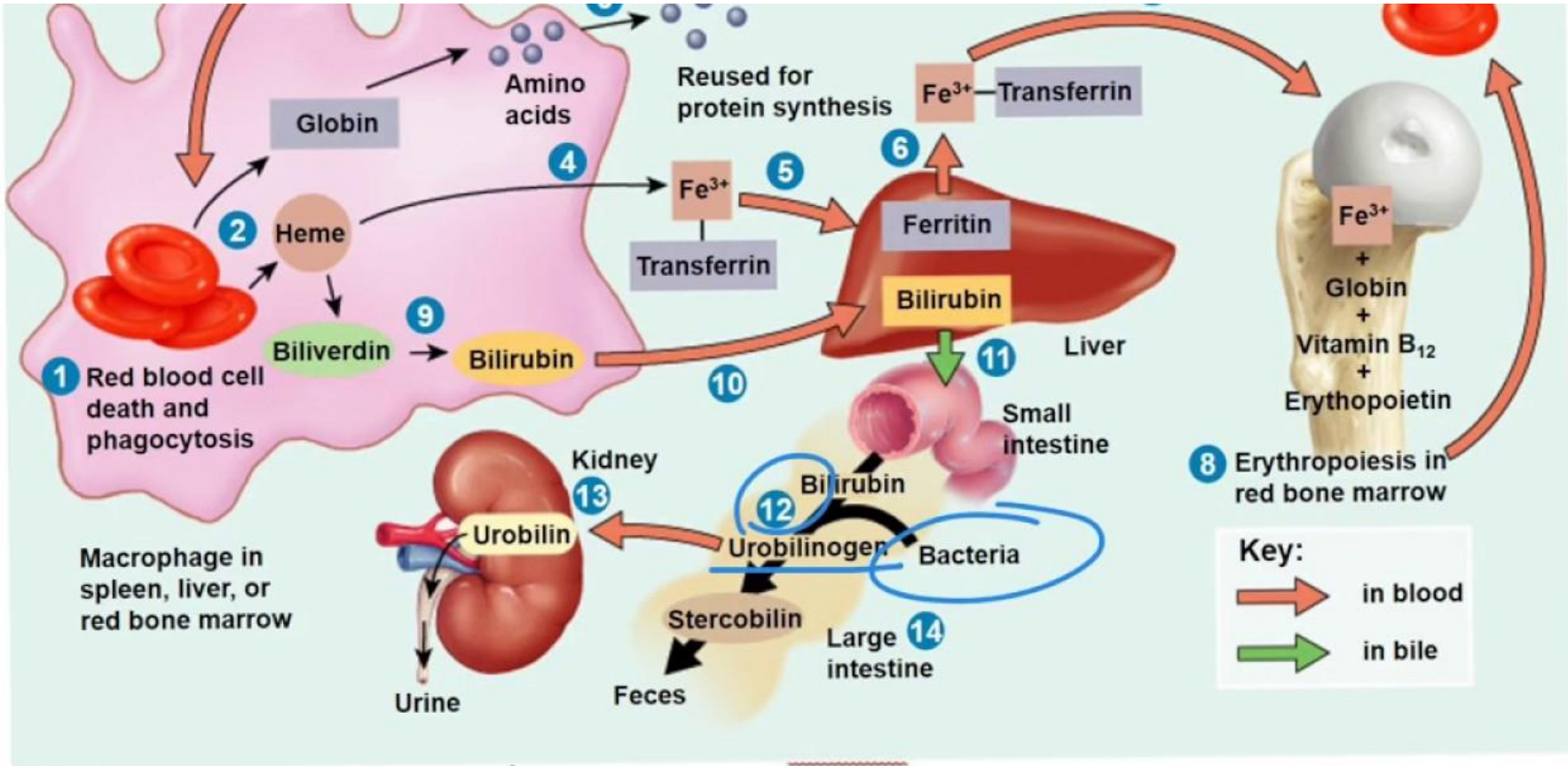
Vấn đề lâm sàng: Thiếu máu mạn do đường tiêu hóa

Quá trình bình thường

- Sinh lý tạo máu

Quá trình bệnh lý

- Các nguyên nhân thiếu máu mạn trong bệnh ngoại khoa tiêu hóa- gan mật
- Chẩn đoán nguyên nhân, phân biệt



Urobilin

Kidneys

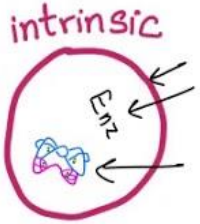
Excreted in Feces

Causes of anemia

Production defects

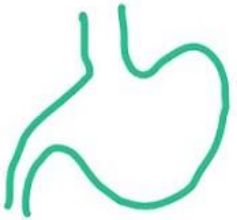
Maturation defects

Survival defects



Sequestration

Blood loss



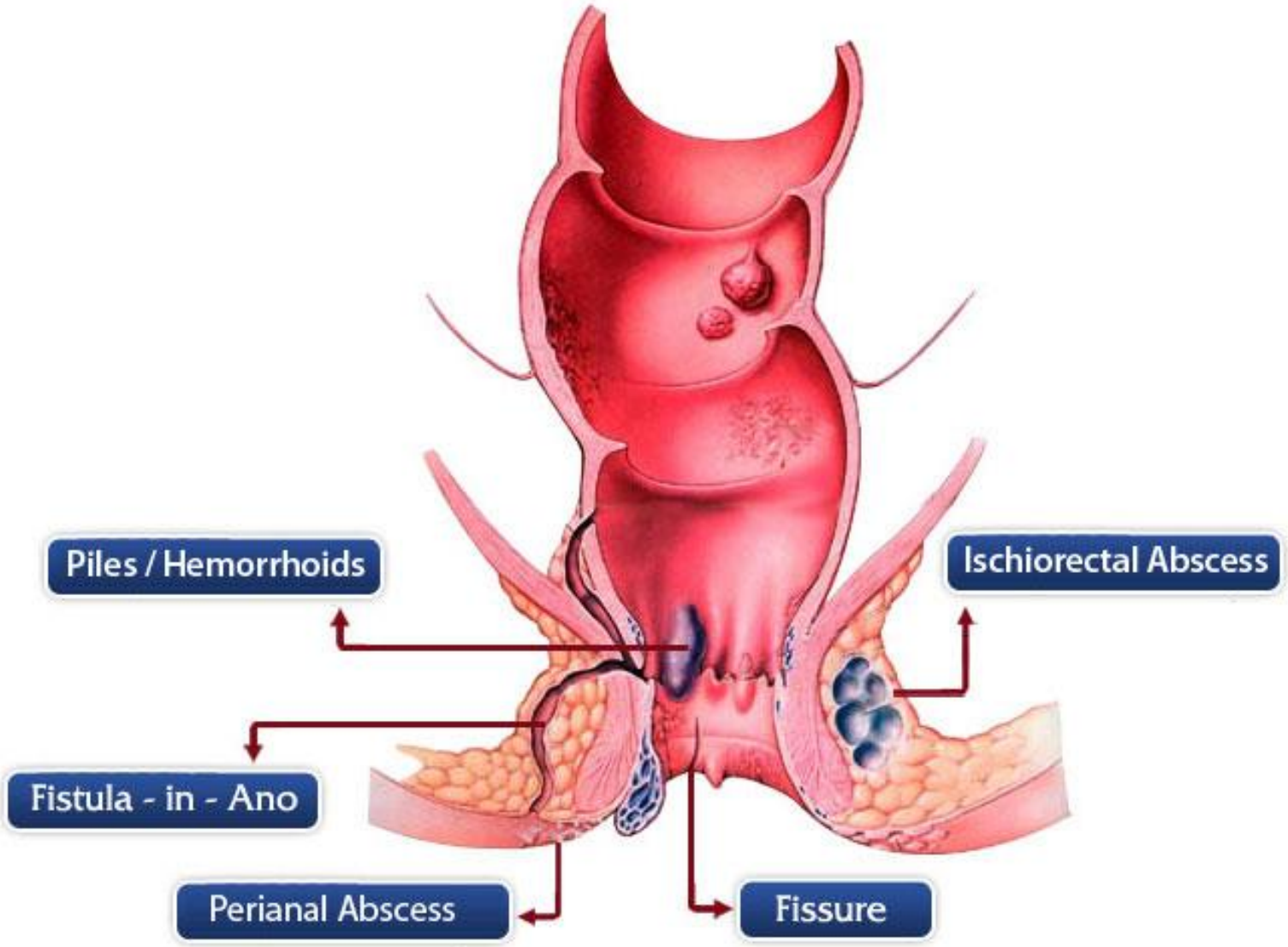
Vấn đề lâm sàng: Than phiền ở hậu môn, trực tràng

Quá trình bình thường

- Giải phẫu ống hậu môn, trực tràng
- Sinh lý đại tiện

Quá trình bệnh lý

- Chẩn đoán các bệnh lý HM-TT: áp xe, rò, trĩ, sa trực tràng … (LS,CLS)
- Nguyên tắc điều trị


Piles / Hemorrhoids
Ischiorectal Abscess
Fistula - in - Ano
Perianal Abscess
Fissure