INTEGRATED EMERGENCIES

COMPILED MODULE

CASE-1

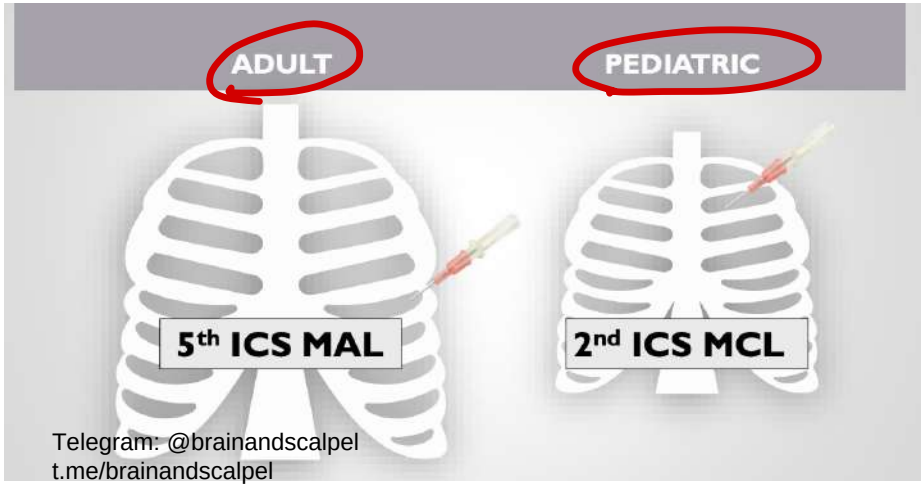
1° survey

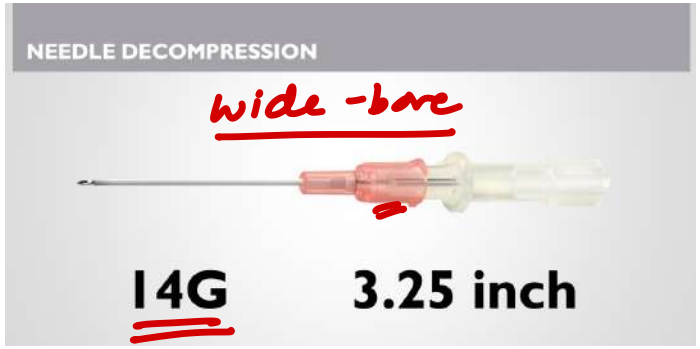
H/o RTA with Chest bruising + Dyspnea
BP 90/60mm, Pulse 114bpm
Next step:
a) Needle thoracostomy
b) ICD
c) eFAST → Hemothorax / Pneumothorax
d) CXR

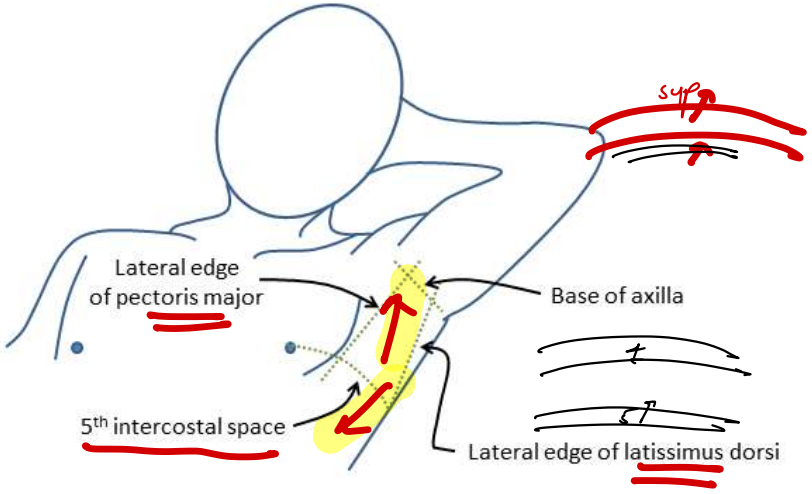
- CXR
- eFAST
- PXR

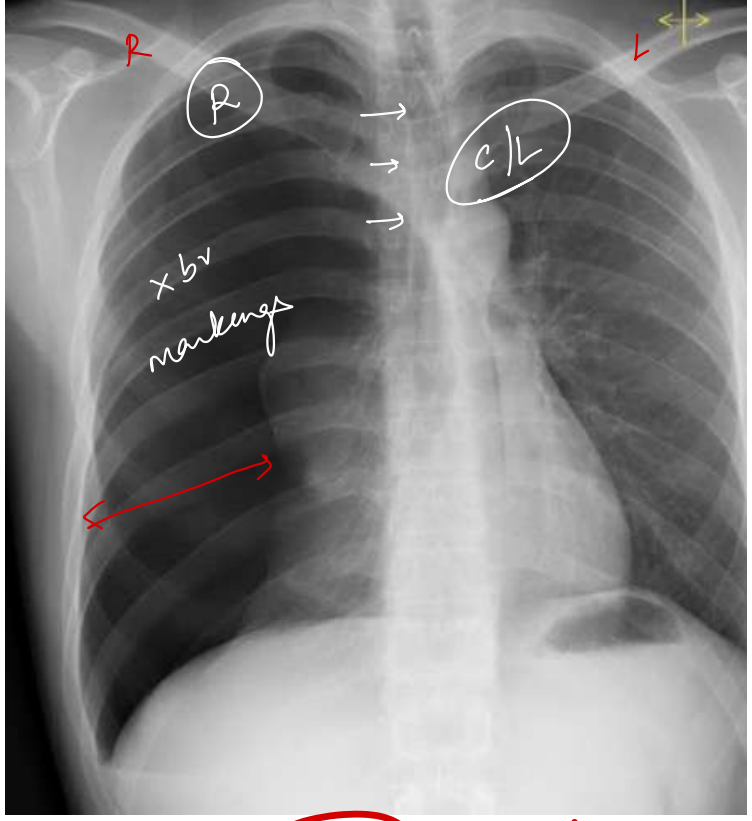
H/o RTA with Chest bruising, Dyspnea
BP 90/60mm, Pulse 114bpm
Neck veins dilated – obstructive / ♡ → Tension Ptx / ♡ tamponade
Right hemithorax hyper-resonant on percussion

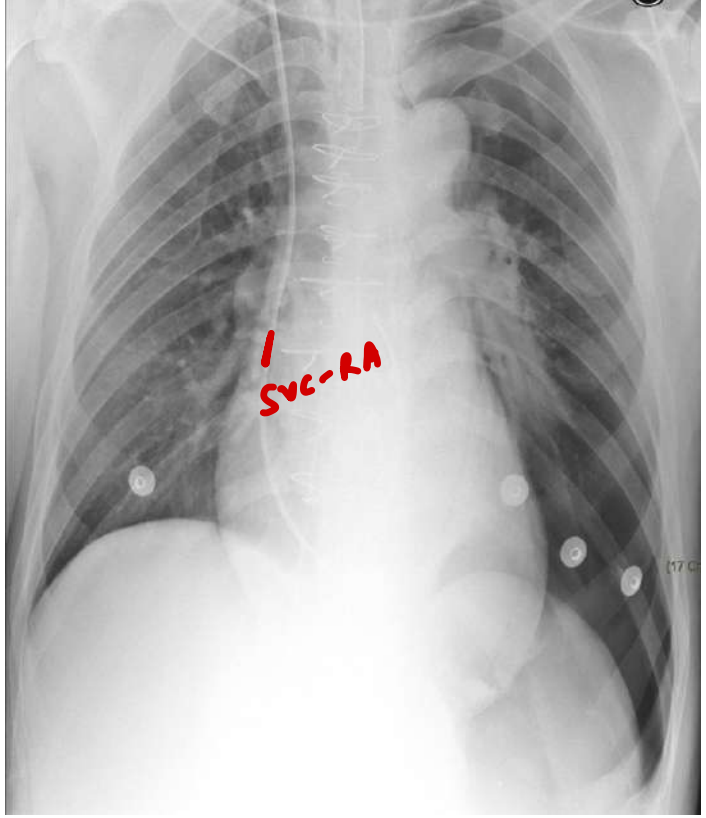
Next step:
a) Needle thoracostomy
b) ICD
c) NG tube
d) CXR

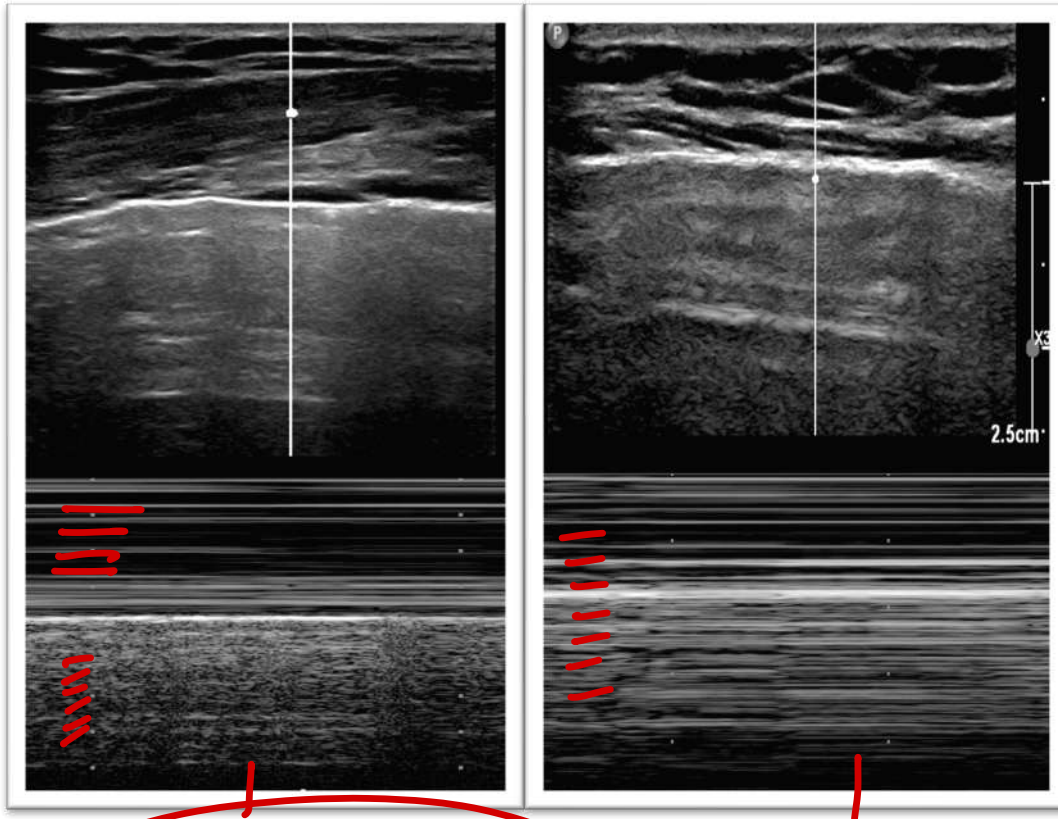




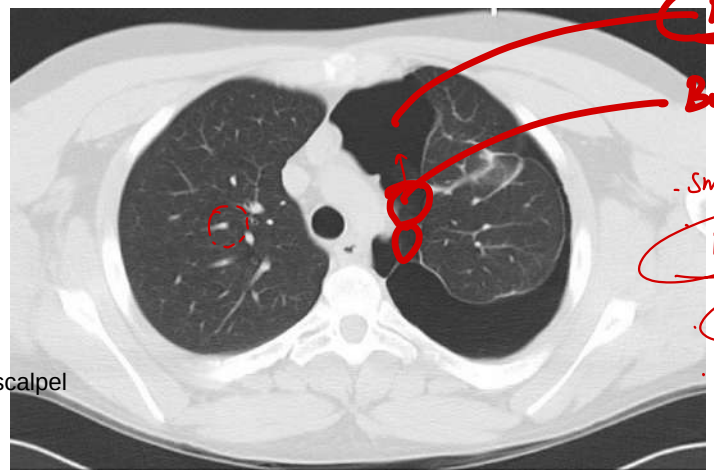








Ptx → Unstable : Needle → ICD
Stable : ICD



- Smokers
- 1°spont Ptx
- Conservative
- Symp / >2cm (CXR)
  - ICD

Deep sulcus → Ptx → SUPINE

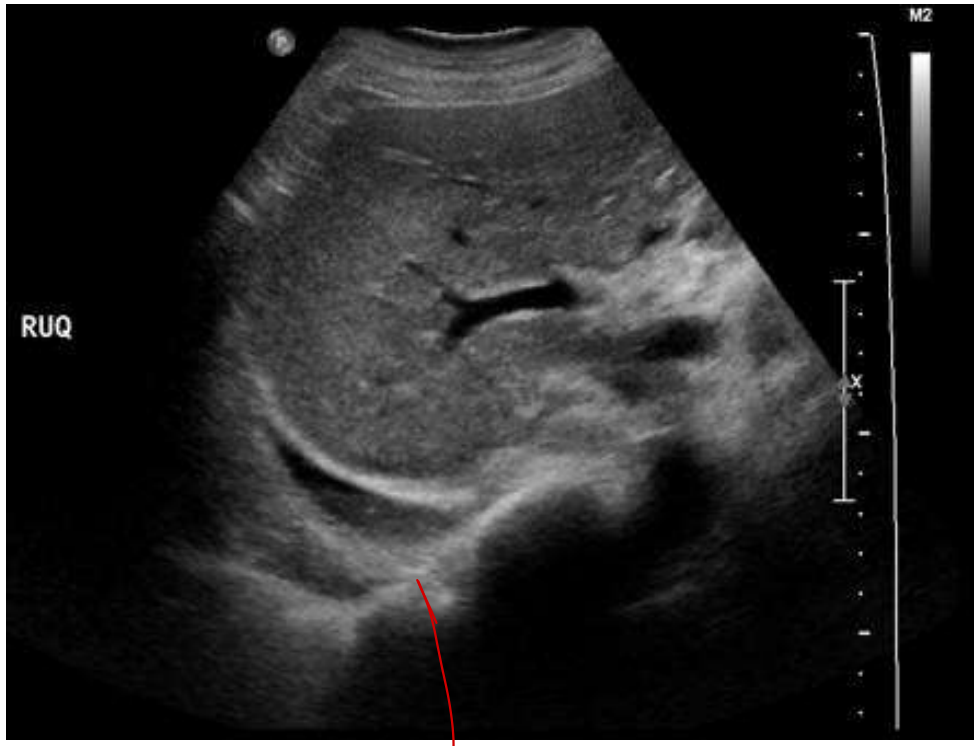
Seashore sign → N
M-mode USG

Barcode → Stratosphere → Ptx

CASE-2

H/o RTA
Chest bruising + Dyspnea
BP 90/60mm, Pulse 114bpm
eFAST in right hepatorenal pouch shown
Next step:
a) CECT abdomen
b) ICD
c) Needle thoracostomy
d) CXR

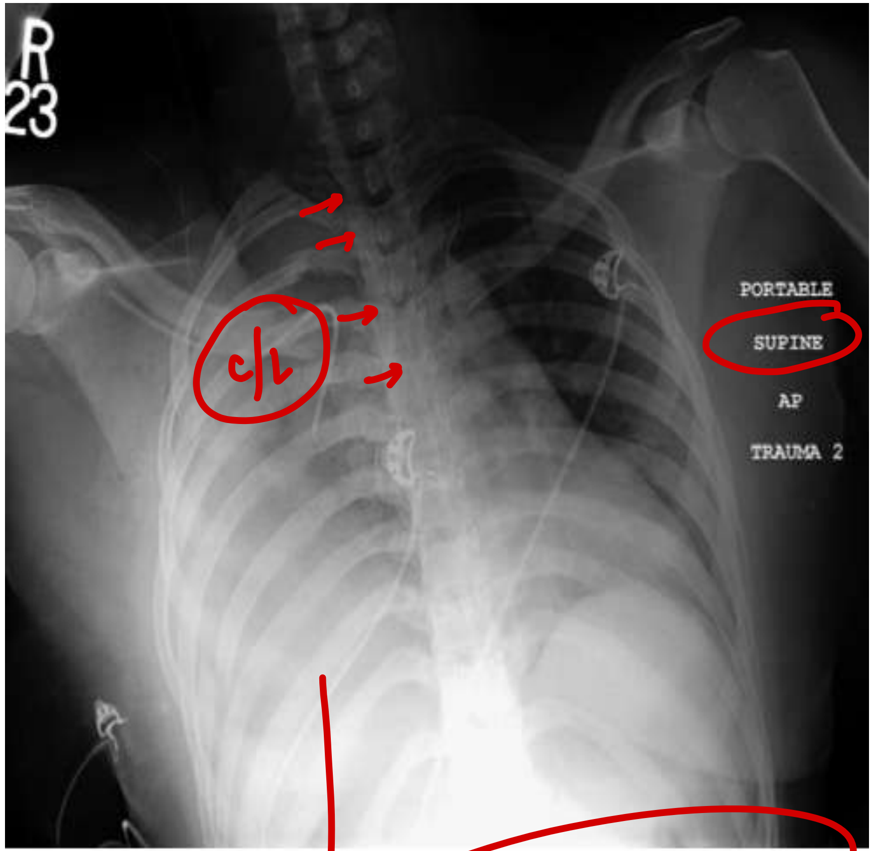
— stable / unstable



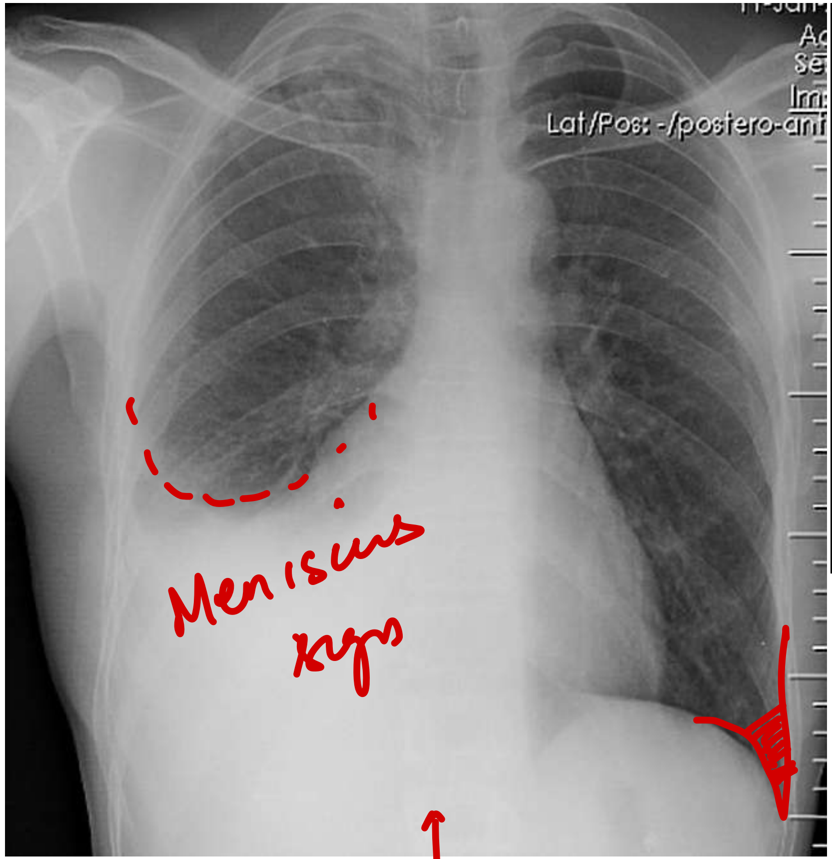
Hemothorax

THORACOTOMY:

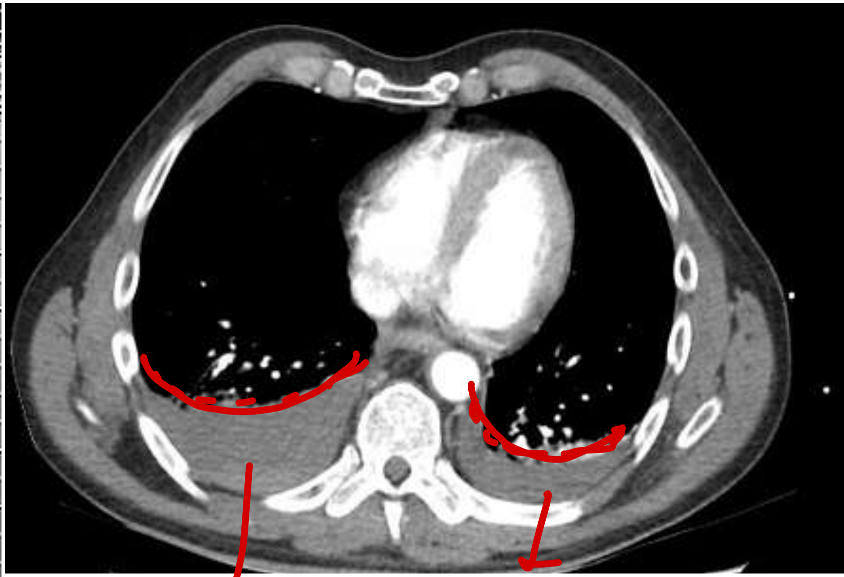
Adults	Immediate output	> 1.5 L in first hour
	Ongoing Output	> 200 cc/hr over next 2-4 hours
Children	Immediate output	> 20 mL/kg in first hour
	Ongoing Output	> 3 mL/kg/hr over next 2-4 hours



White out lung



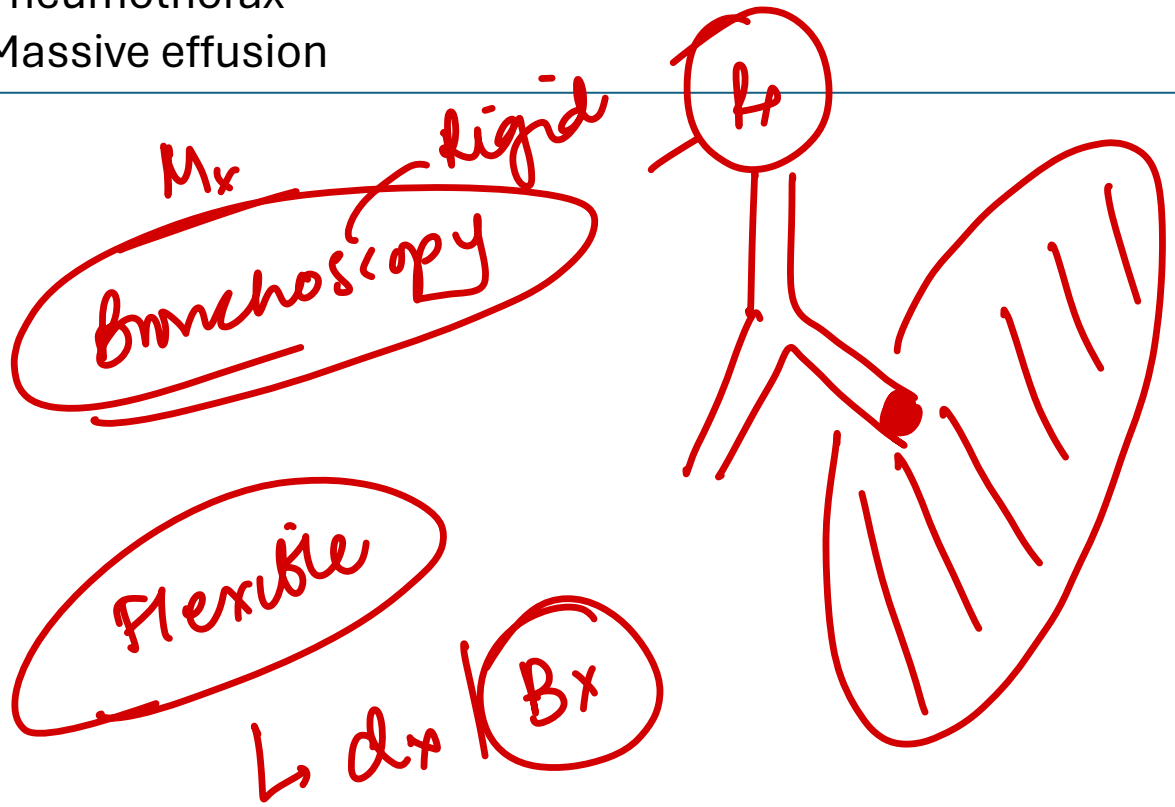
(R) pleural effusion/ hemothorax

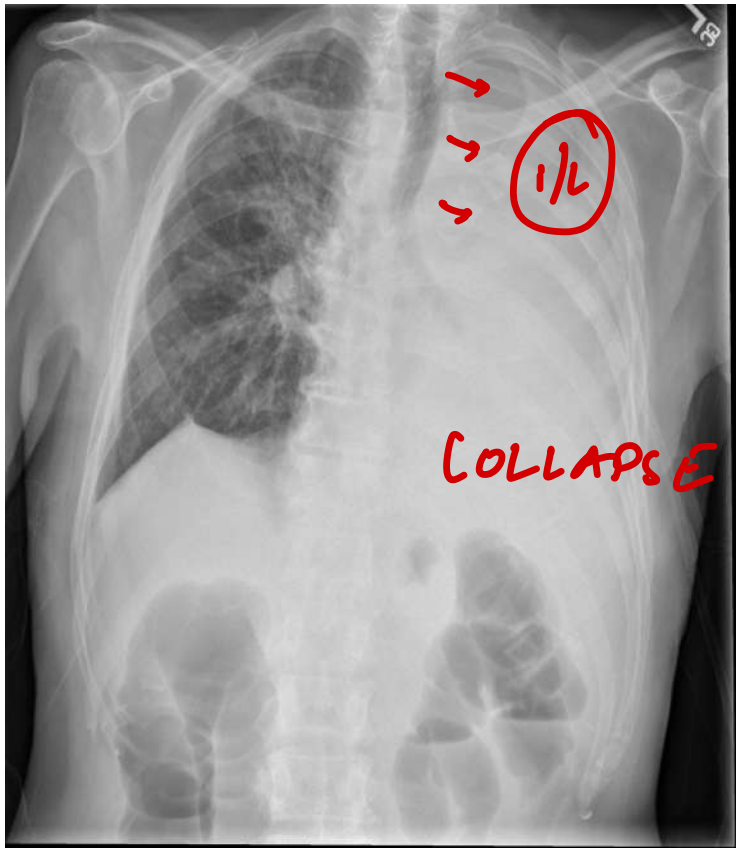


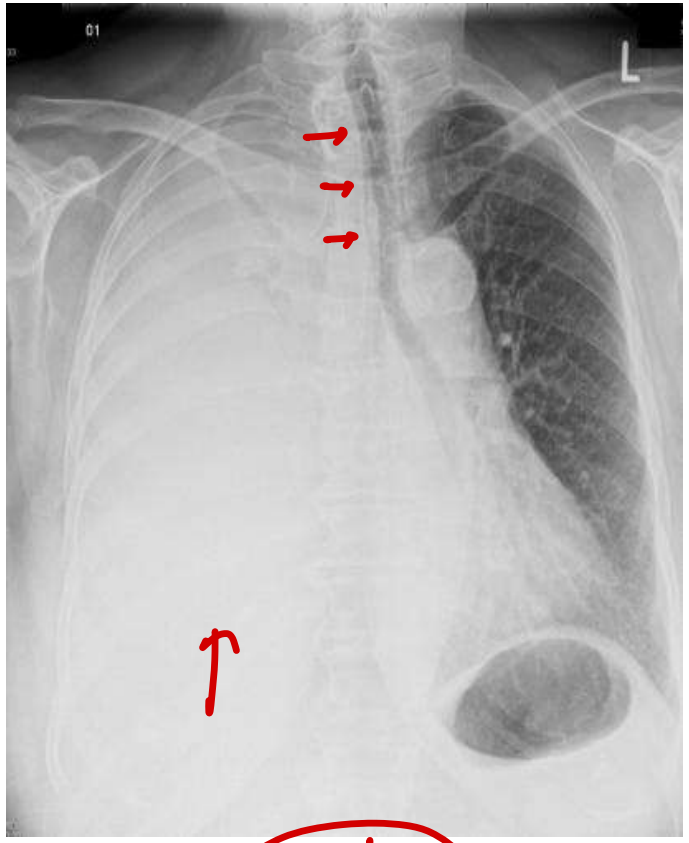
Pleural effusion
CT

CASE-3

10yr old child with sudden respiratory distress
a) Pneumonia
b) FB aspiration
c) Pneumothorax
d) Massive effusion

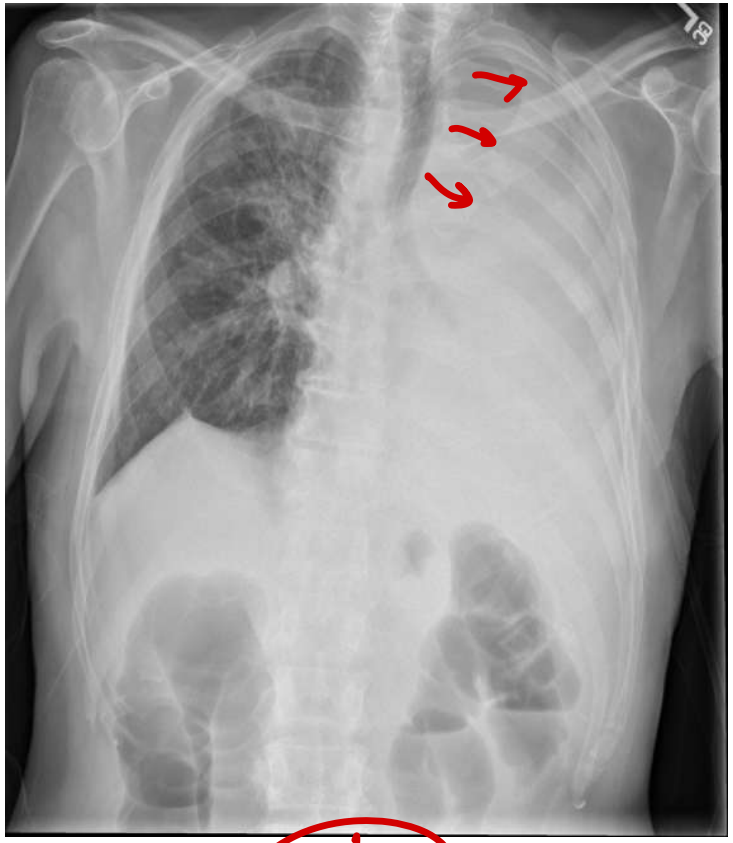






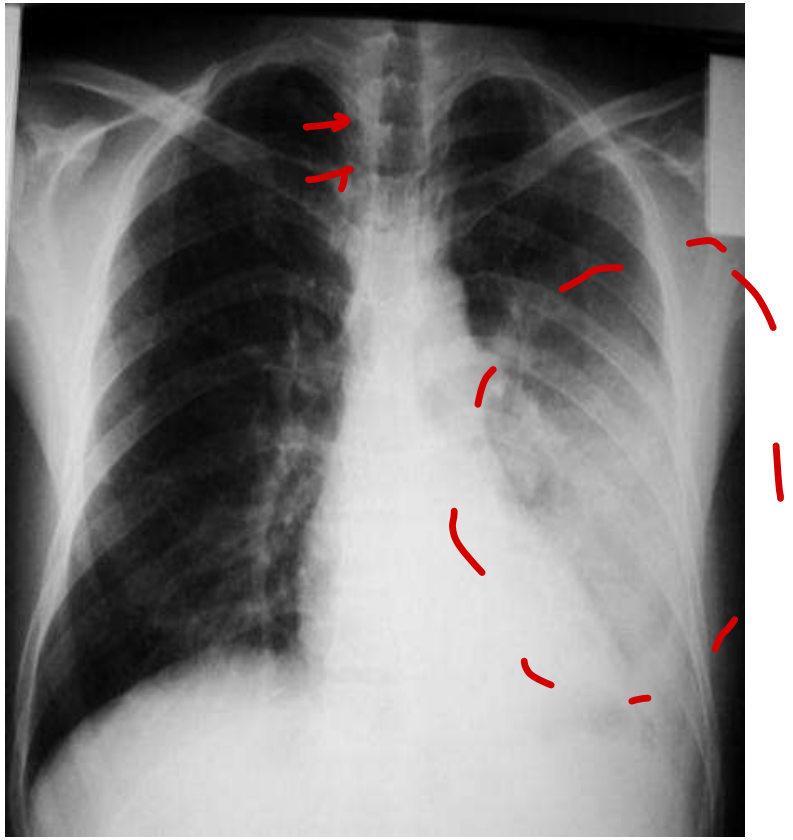
c/L

Pleural effusion



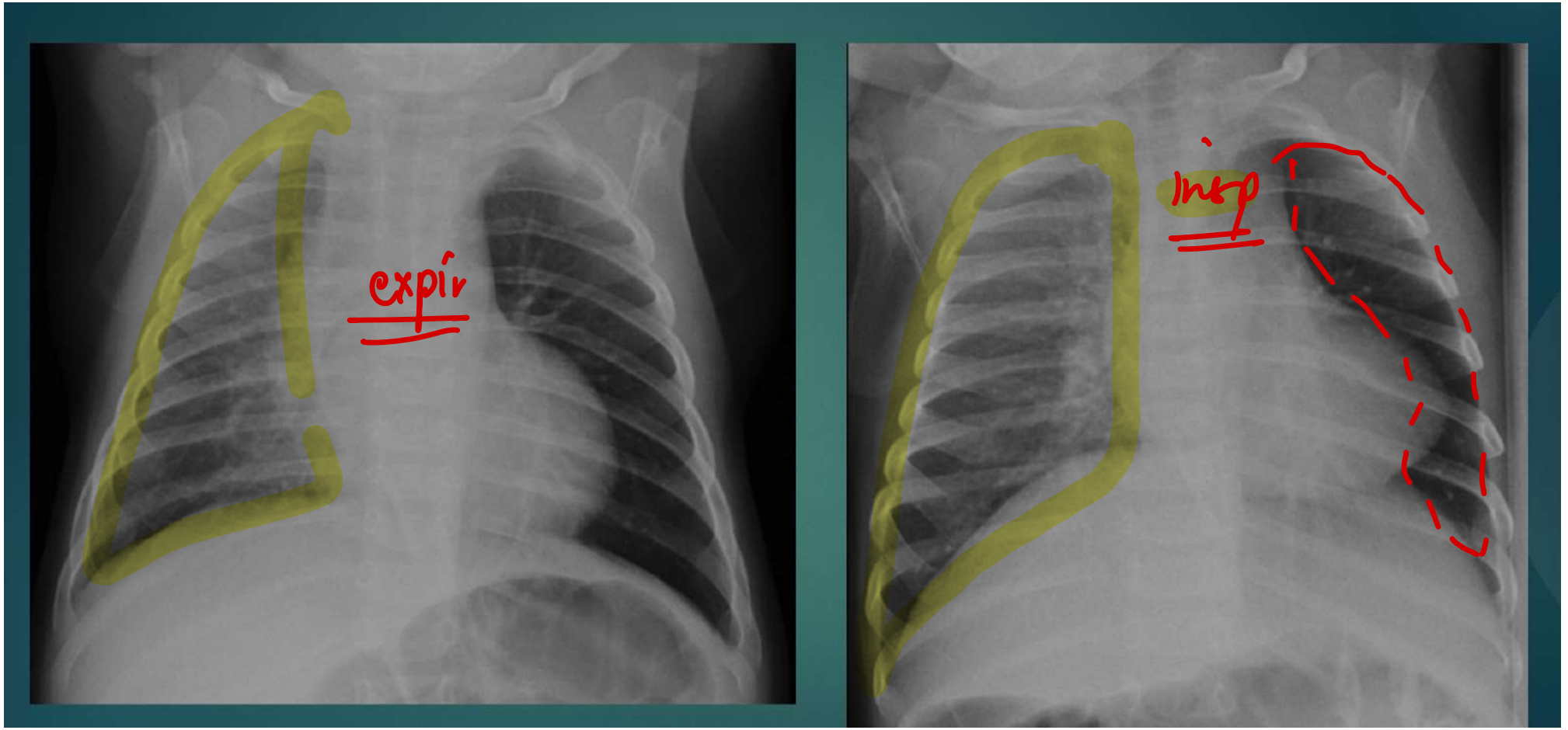
i/L

Collapse

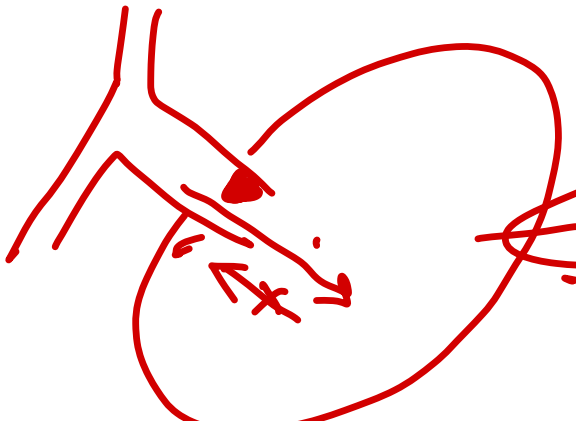


NO SHIFT

Consolidation



FB aspiration



air trapping

CASE-4

Q. 28yr old pregnant female 28 weeks POG with sudden respiratory distress and pain in right lower limb. Next step?

a) CXR-PA
b) Doppler B/L lower limbs
c) CTPA
d) V/Q scan
e) Immediate termination of pregnancy

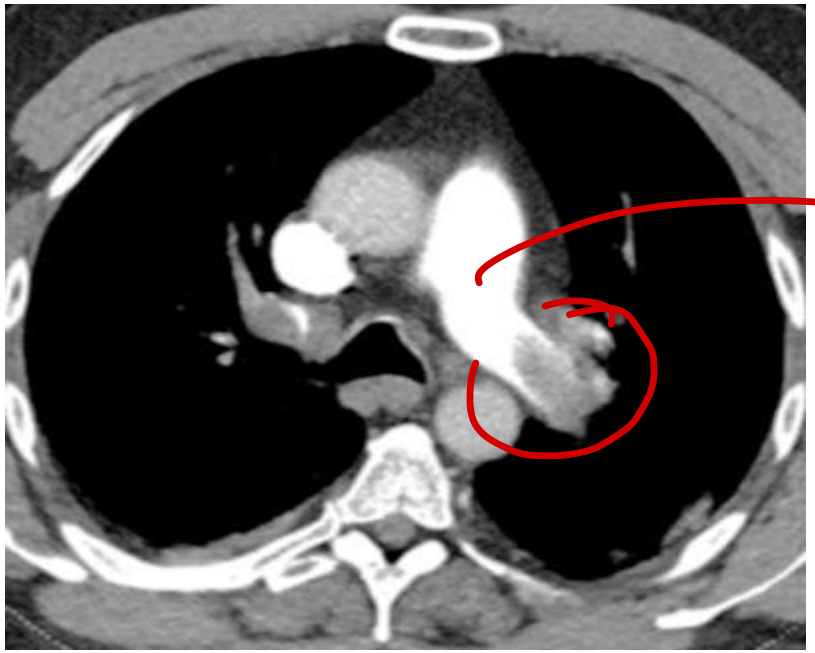
No radⁿ

DVT → PE

↑coagulable

↑ coagⁿ + exc 11/13

↑fibrinogen



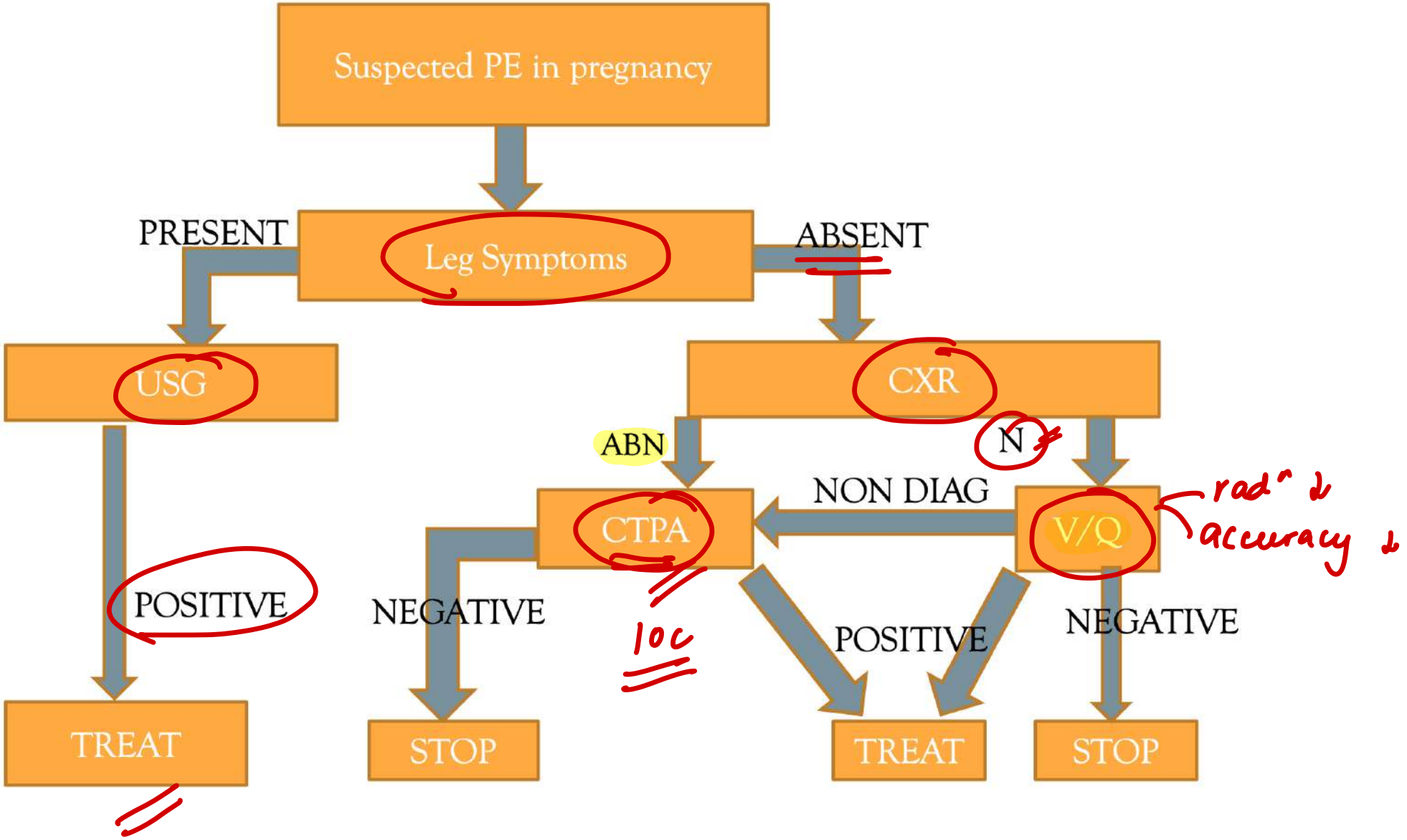
10c : PE

CTPA

D-Dimer

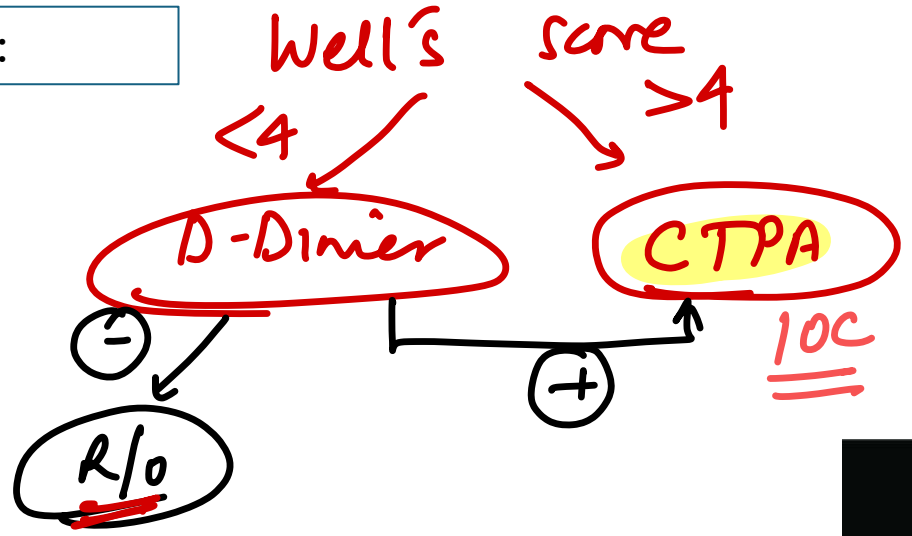
↑FDP

DIAGNOSTIC APPROACH



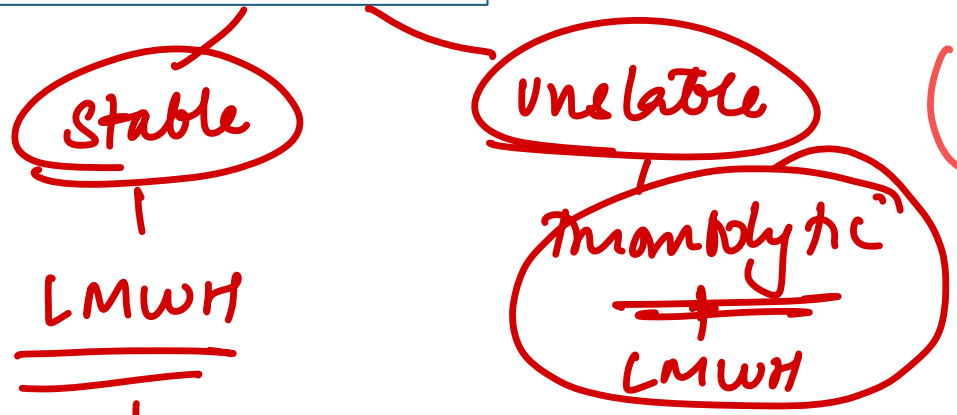
Pulmonary embolism

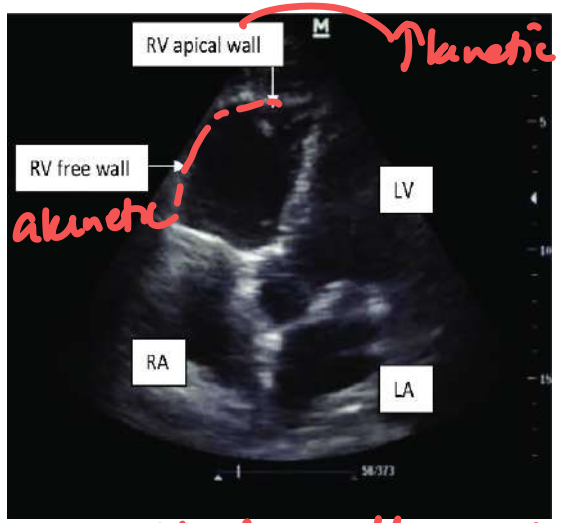
Diagnostic algorithm:



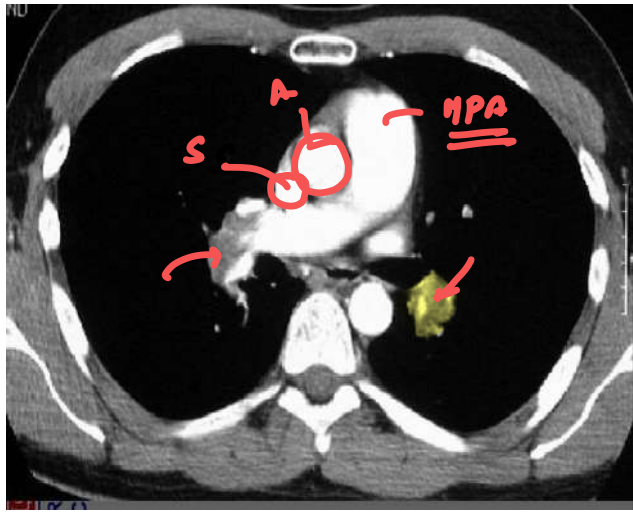
High Clinical Likelihood of Pulmonary Embolism (PE) if Point Score Exceeds 4	
CLINICAL VARIABLE	PE SCORE
Signs and symptoms of DVT	3.0
Alternative diagnosis less likely than PE	3.0
Heart rate >100/min	1.5
Immobilization >3 days; surgery within 4 weeks	1.5
Prior PE or DVT	1.5
Hemoptysis	1.0
Cancer	1.0

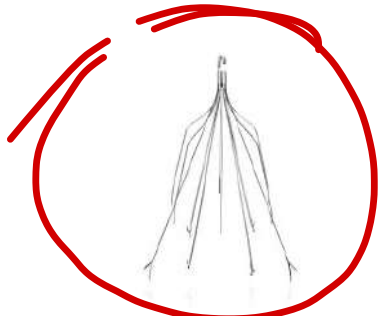
Treatment algorithm:





McConnell sign





RV

Massive

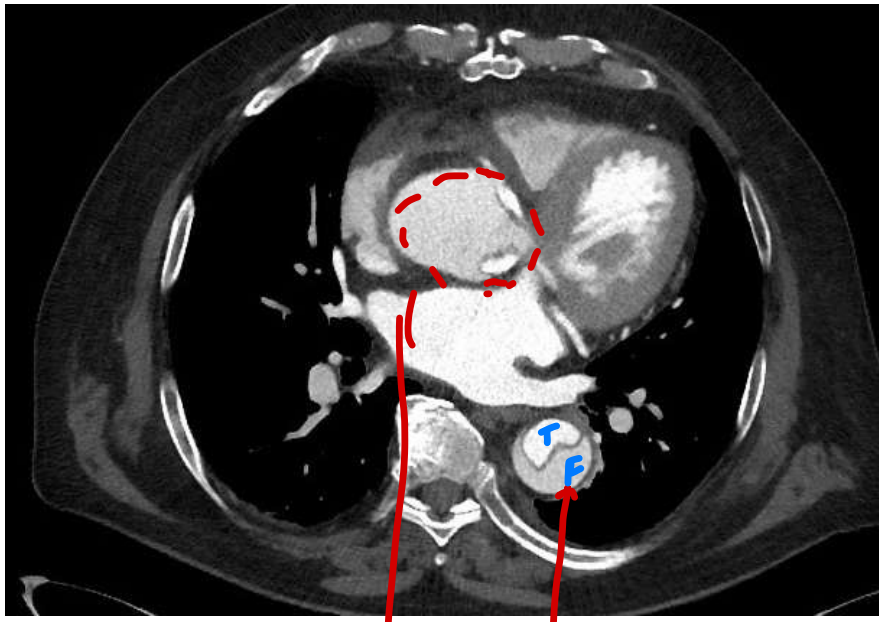
CE : IVC filter

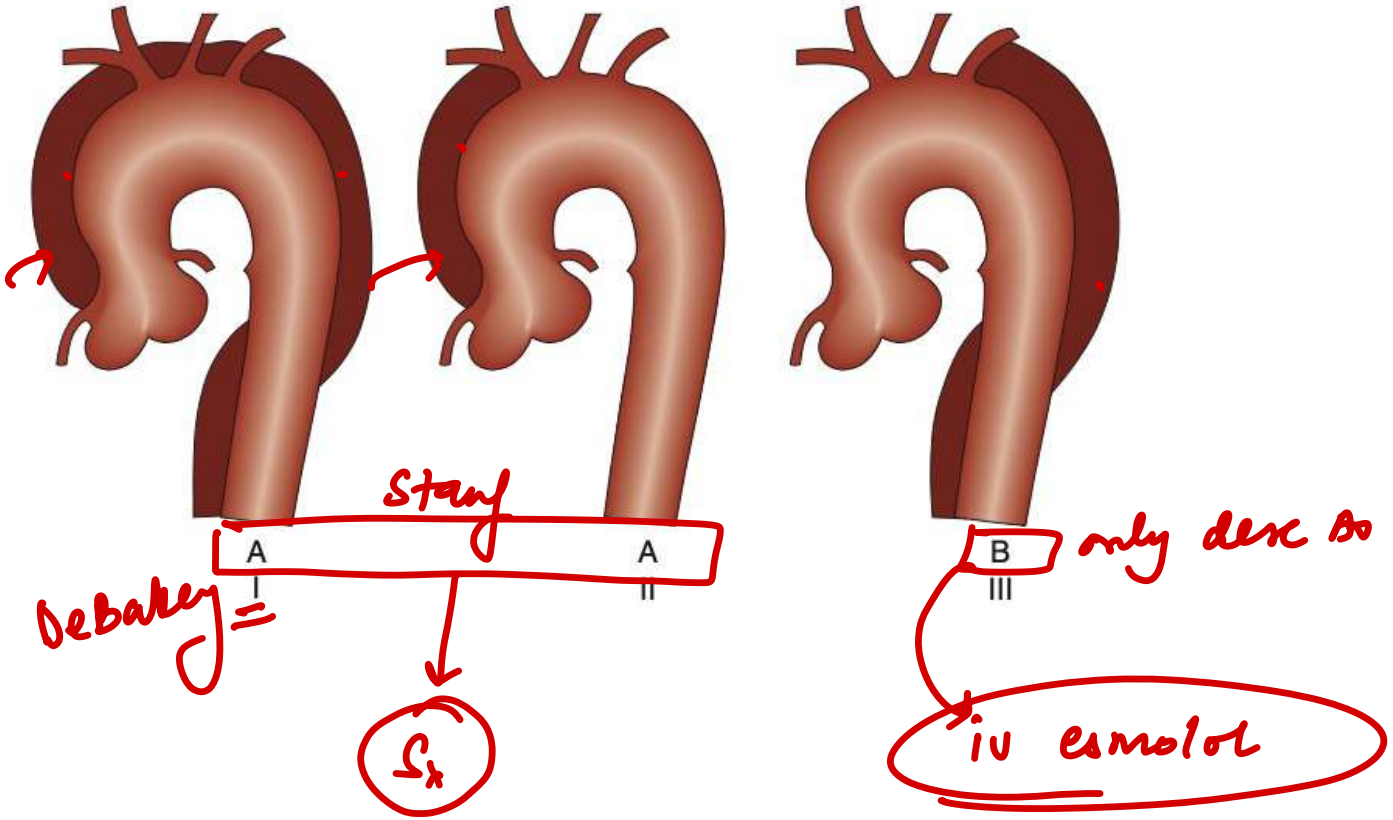
Embolectomy — DSA / Sx

CASE-5

A 65-year-old male presents to the emergency department with severe chest pain radiating to his back. He has a history of hypertension and smoking. His blood pressure is 180/100 mmHg, and heart rate is 90 bpm. An electrocardiogram shows no acute ischemic changes. CTA is shown. What is the next step for this patient?

A) Immediate surgical repair
B) Intravenous beta-blockers
C) Intravenous nitroprusside
D) Intravenous anticoagulation





CASE-6

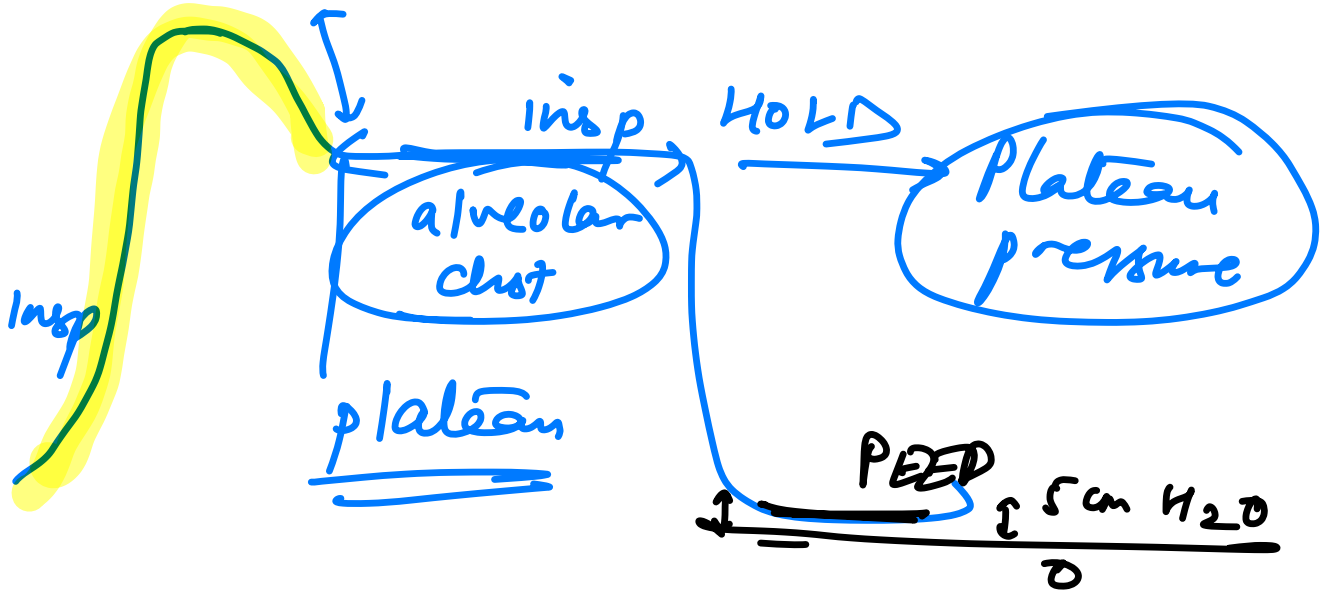
A 55-year-old female with a history of pneumonia requiring mechanical ventilation develops acute respiratory distress syndrome (ARDS). She is currently intubated and receiving mechanical ventilation. Which of the following is a key component of lung-protective ventilation in the management of ARDS for this patient?

A) ~~High~~ tidal volume ventilation – Low

B) Low positive end-expiratory pressure (PEEP) – High

C) Permissive ~~hypocapnia~~ hypercapnia

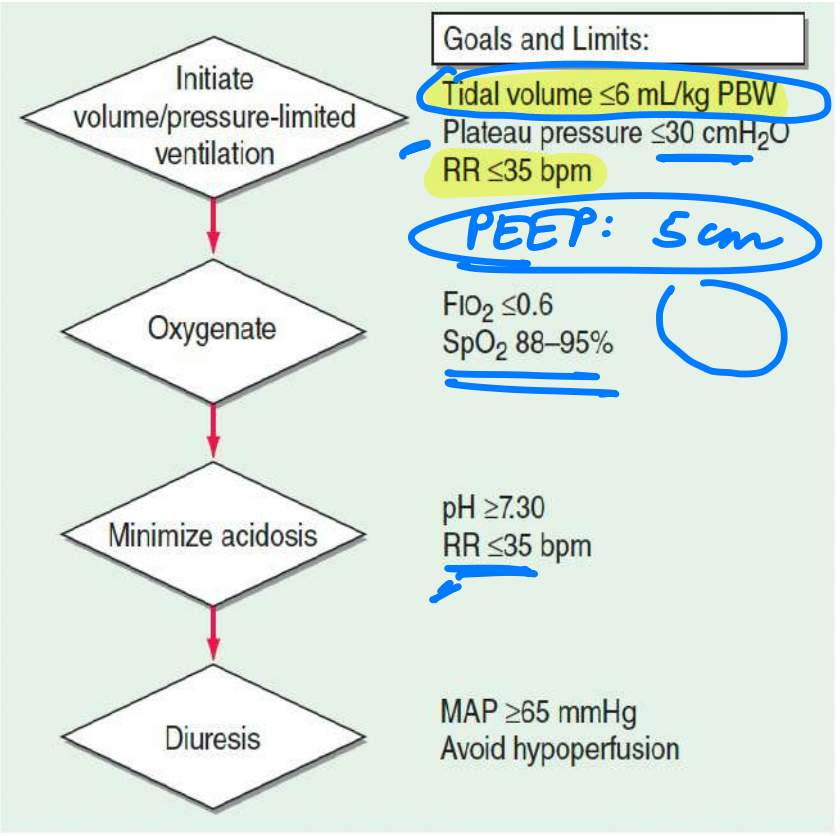
D) Plateau pressure monitoring

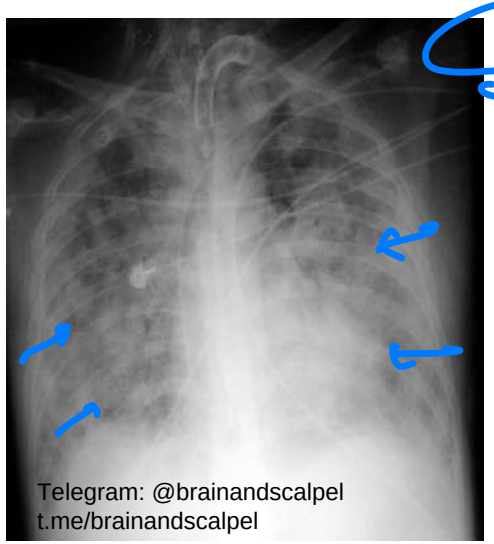


ARDS

PaO2/FiO2 — Berlin criteria

DIAGNOSTIC CITERIA FOR ARDS			
SEVERITY: <300 OXYGENATION[a]	ONSET	CHEST RADIOGRAPH	ABSENCE E OF LEFT ARTRIAL HYPERTENSION
Mild: 200 - 300 Moderate: 100 - 200 Severe: <100	Acute: within 1 week of clinical insult or new or worsening respiratory symptoms	Bilateral opacities consistent with pulmonary edema not fully explain by effusions, lobar/lung collapse or nodules	PCWP (N) 8-12 mm Hg



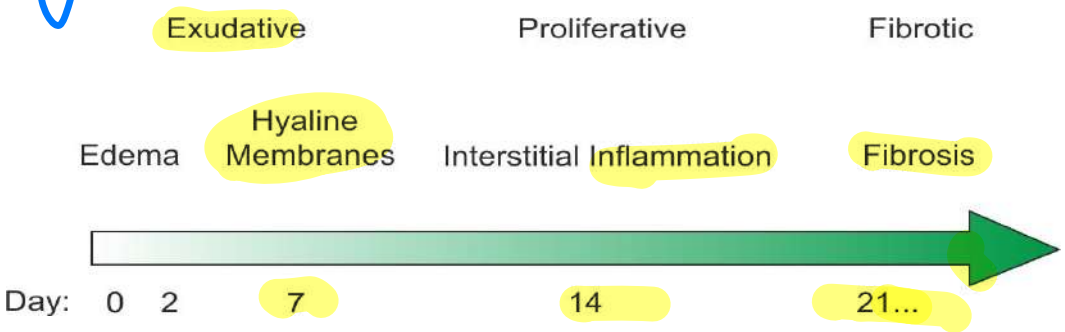


ARDS

Peripheral multifocal

♡ p.edema

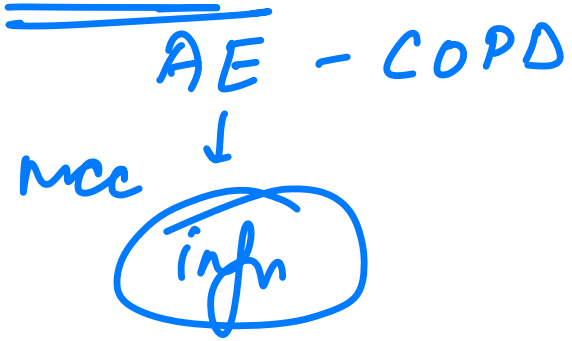
Batwing



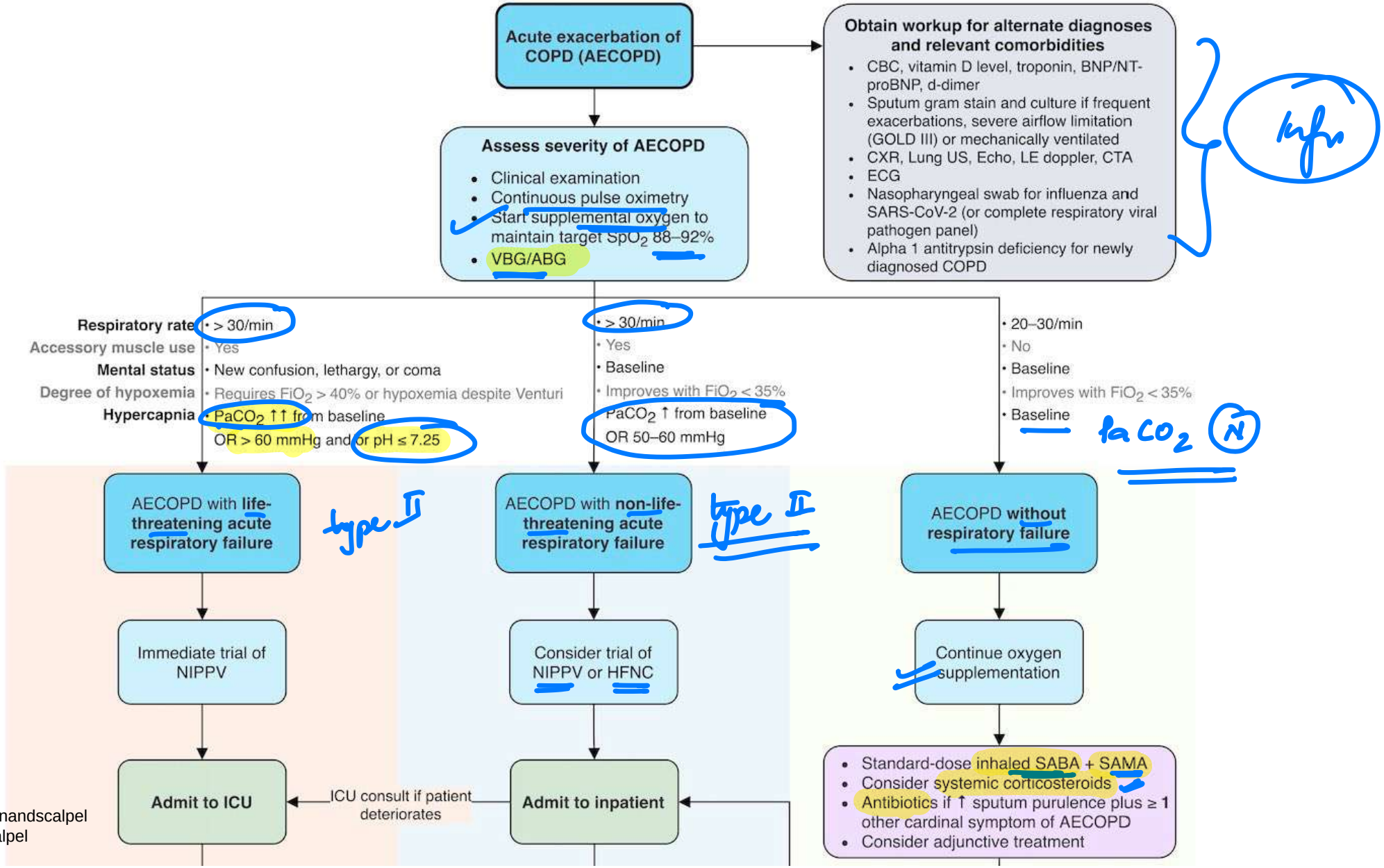
CASE-7

A 65-year-old male with a history of COPD presents to the emergency department with increased shortness of breath, cough, and sputum production for the past two days. He has a long-standing smoking history. On examination, he is tachypneic with diffuse wheezing. Arterial blood gas analysis shows respiratory acidosis. Which of the following is NOT typically used in the initial management of this patient's management?

A) Inhaled Short-acting bronchodilators
B) Inhaled corticosteroids
C) Antibiotics
D) Inhaled Muscaranic antagonists



AE COPD

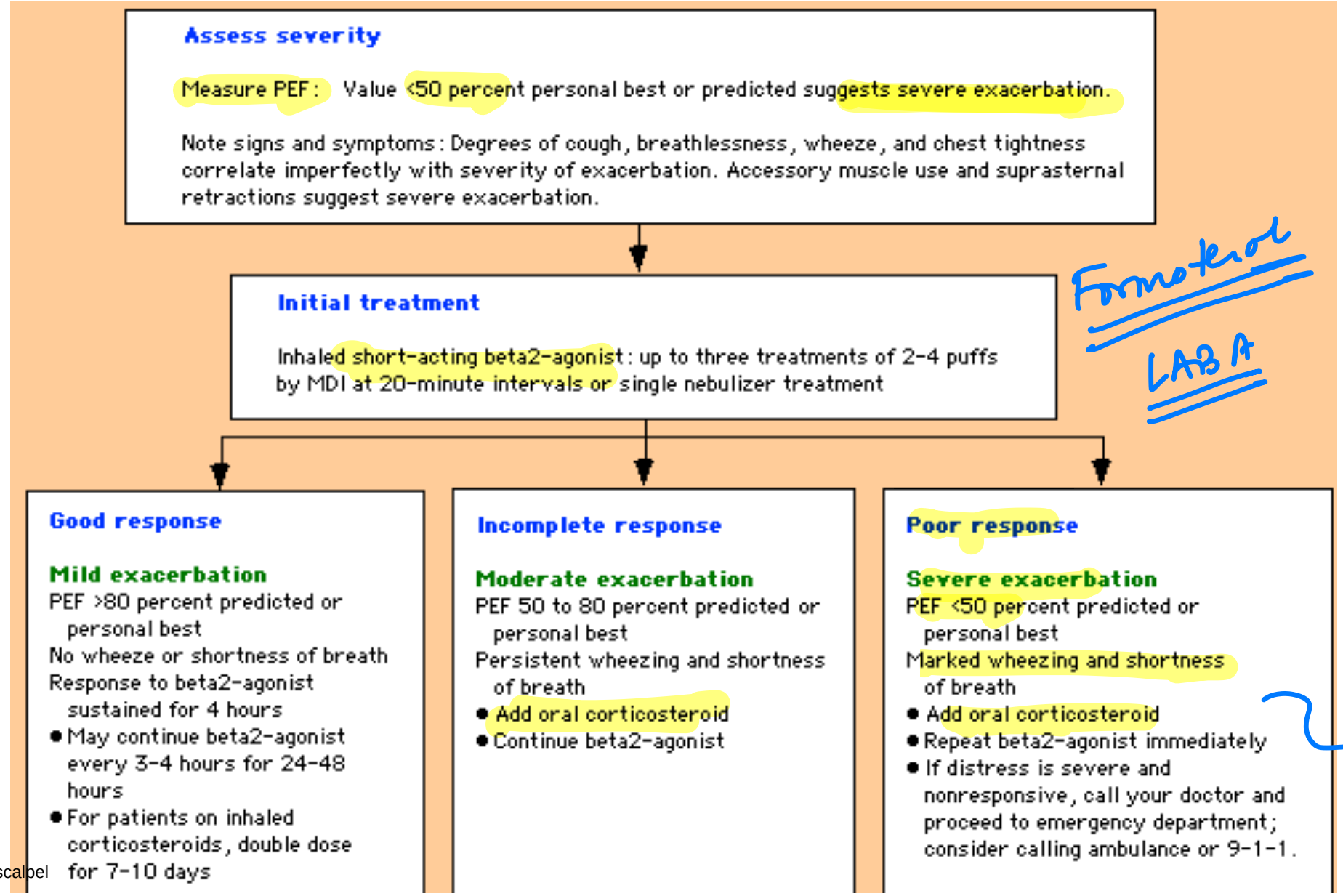


CASE-8

A 35-year-old female presents to the emergency department with acute shortness of breath, chest tightness, and wheezing. She has a history of asthma and reports worsening symptoms over the past 24 hours. On examination, she is tachypneic with audible wheezing. Which of the following findings on peak expiratory flow (PEF) measurement would indicate a severe exacerbation of asthma in this patient?

A) PEF > 80% of predicted or personal best
B) PEF 50-79% of predicted or personal best
C) PEF 30-49% of predicted or personal best
D) PEF < 50% of predicted or personal best

AE ASTHMA



CASE-9

A 45-year-old male with a history of tuberculosis presents to the emergency department with massive hemoptysis, coughing up approximately 300 mL of bright red blood. He is hemodynamically stable. What is the next step in the management of this patient?

A) Immediate intubation and mechanical ventilation
B) Administering intravenous antibiotics
C) Performing emergent bronchoscopy
D) Get a CTBA

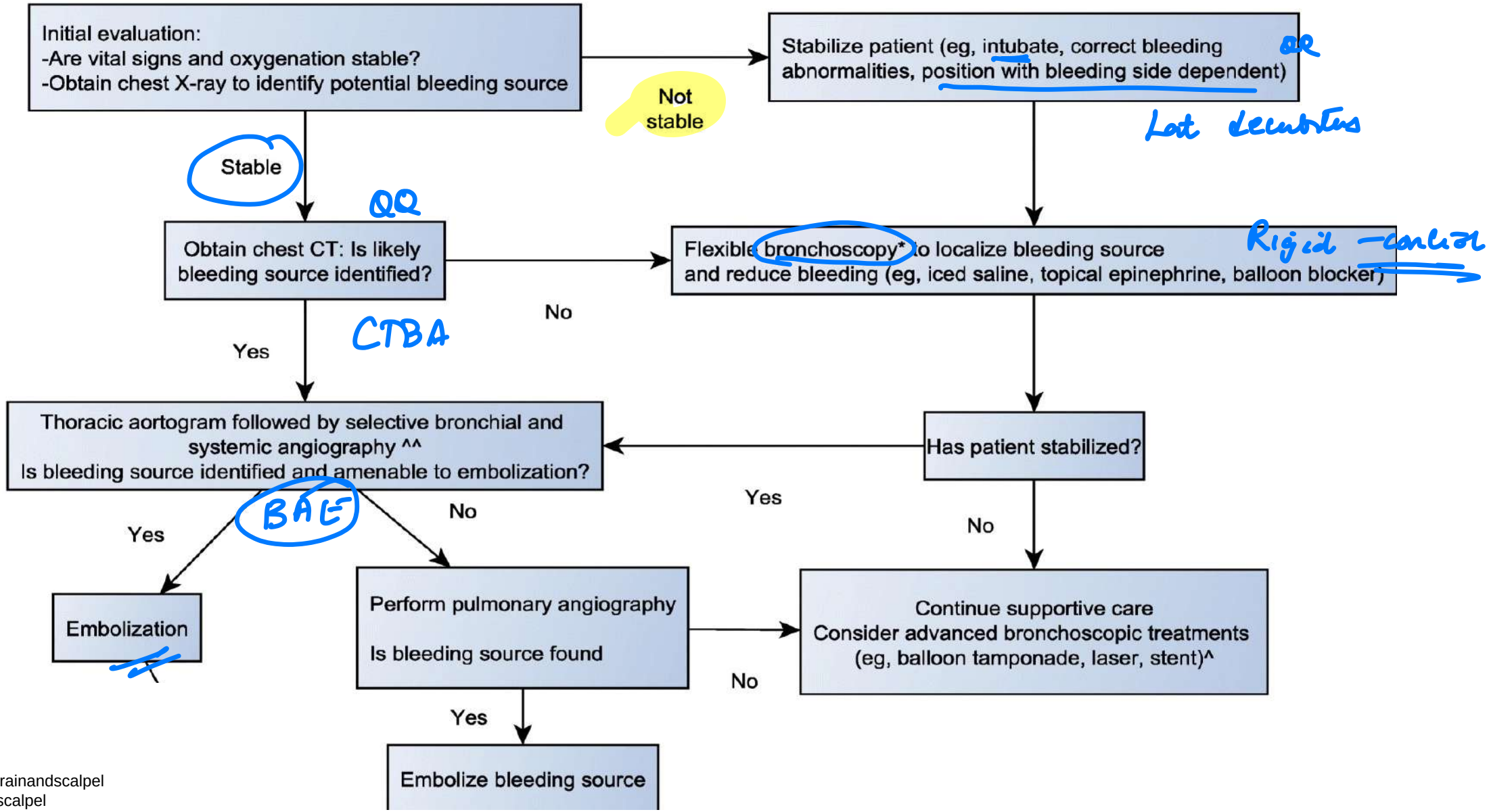
- > 150 ml one episode
- > 500 ml / 24 hrs

unstable

mcc: bronchial arteries

BAE

MASSIVE HEMOPTYSIS



CASE-10

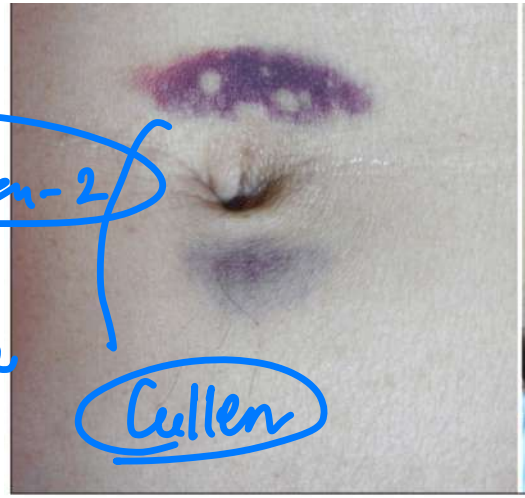
Fox: Inguinal

Acute epigastric pain abdomen radiating to back , nausea, vomiting

Next step:
a) CECT abdomen
b) DSA
c) Amylase
d) Iv fluids

Lipase

Most sp: Trypsinogen-2
TAP - trypsinogen activated peptide

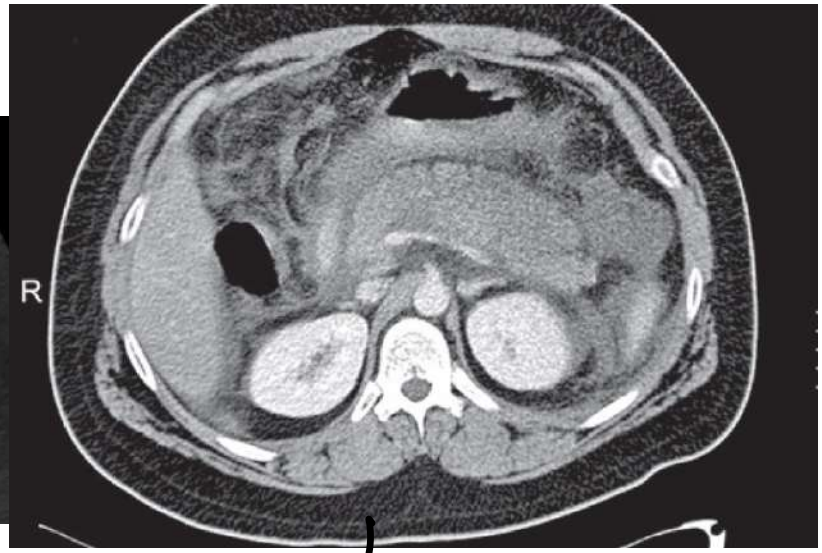


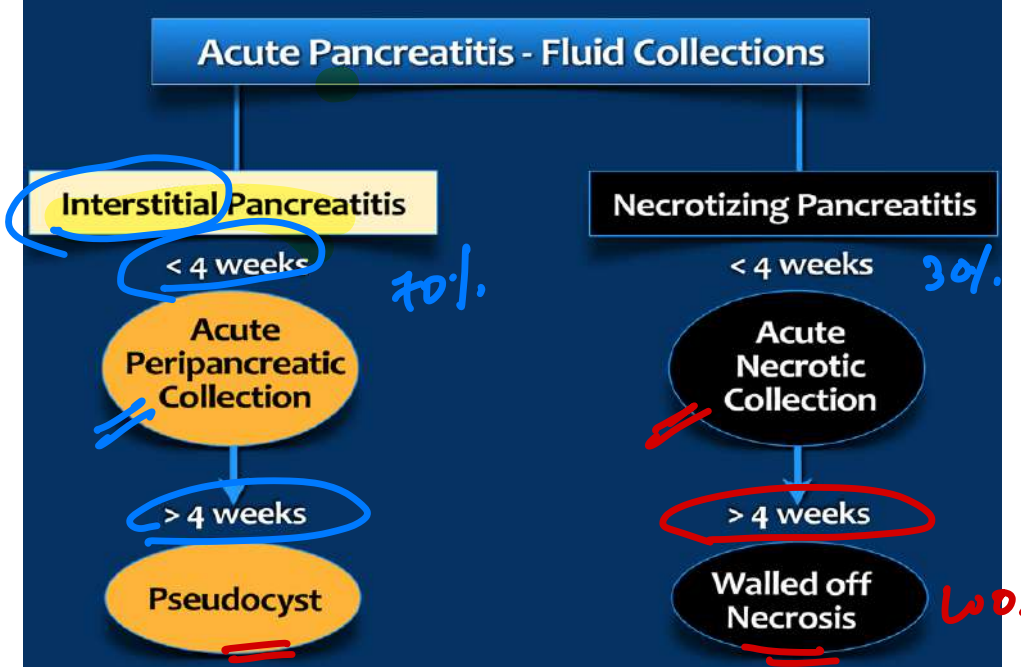
Initial Investigation: USG
IOC / Best: CECT → >48hrs

1. Typical abdominal pain
2. Serum lipase or amylase activity ≥ 3x upper limit normal
3. Characteristic CT findings / USG

REVISED ATLANTA

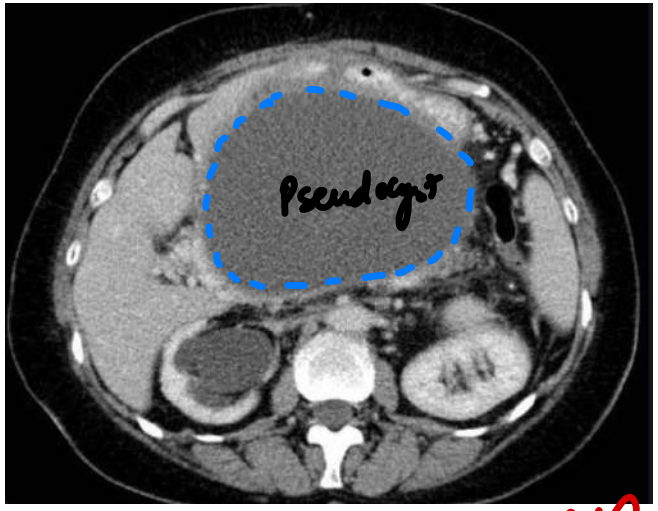
2/3



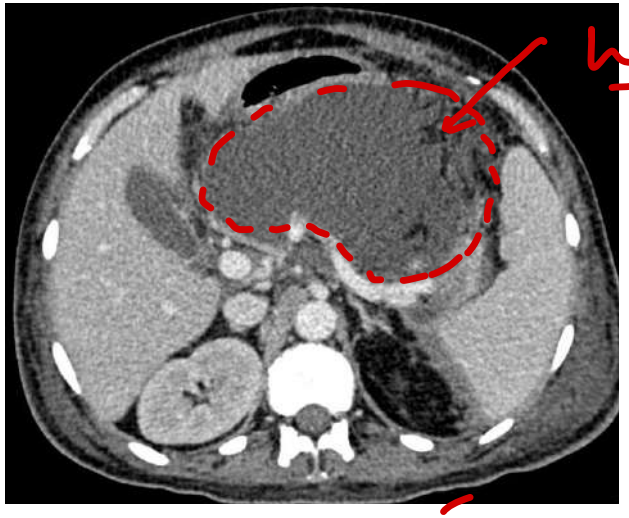


Revised Atlanta

Disease severity	Symptoms
Mild acute pancreatitis	No organ failure No local or systemic complications
Moderately severe acute pancreatitis	Organ failure that resolves within 48 h (transient organ failure) Local or systemic complications without persistent organ failure
Severe acute pancreatitis	Persistent organ failure (>48 h) Single organ failure Multiple organ failure



homogeneous



heterogenous

BISAP score

BUN	• BUN >25 mg/dL (8.9 mmol/L) (1 point)
Impaired mental status	• Abnormal mental status with a Glasgow coma score <15 (1 point)
SIRS	• Evidence of SIRS (systemic inflammatory response syndrome) (1 point)
Age	• age >60 years old (1 point)
Pleural effusion	• Imaging study reveals pleural effusion (1 point)

0-2 Points: Lower mortality (<2 percent)

3-5 Points: Higher mortality (>15 percent

Ranson Criteria and Prognosis

At Admission	At 48 hours
• Age > 55 years	• Decrease in hematocrit > 10%
• Leukocyte count > 16 x 10^3/mcL	• Increase in BUN of > 8 mg/dL
• Blood glucose > 200 mg/dL	• Serum calcium less than 8 mg/dL
• Serum LDH > 350 IU/L	• PaO_2 < 60 mm Hg
• Serum AST > 250 IU/L	• Base deficit > 4 mEq/L
	• Estimated fluid sequestration > 6,000 mL

Score < 3 = Mortality 0–3% • Score ≥ 3 = Mortality 11–15% • Score ≥ 6 = Mortality 40%

LEGAL

BUSH-CL

Balthazar / Mod. CTSI

Pancreatic inflammation

- 0: normal pancreas
- 2: intrinsic pancreatic abnormalities with or without inflammatory changes in peripancreatic fat
- 4: pancreatic or peripancreatic fluid collection or peripancreatic fat necrosis

Pancreatic necrosis

- 0: none
- 2: 30% or less
- 4: more than 30%

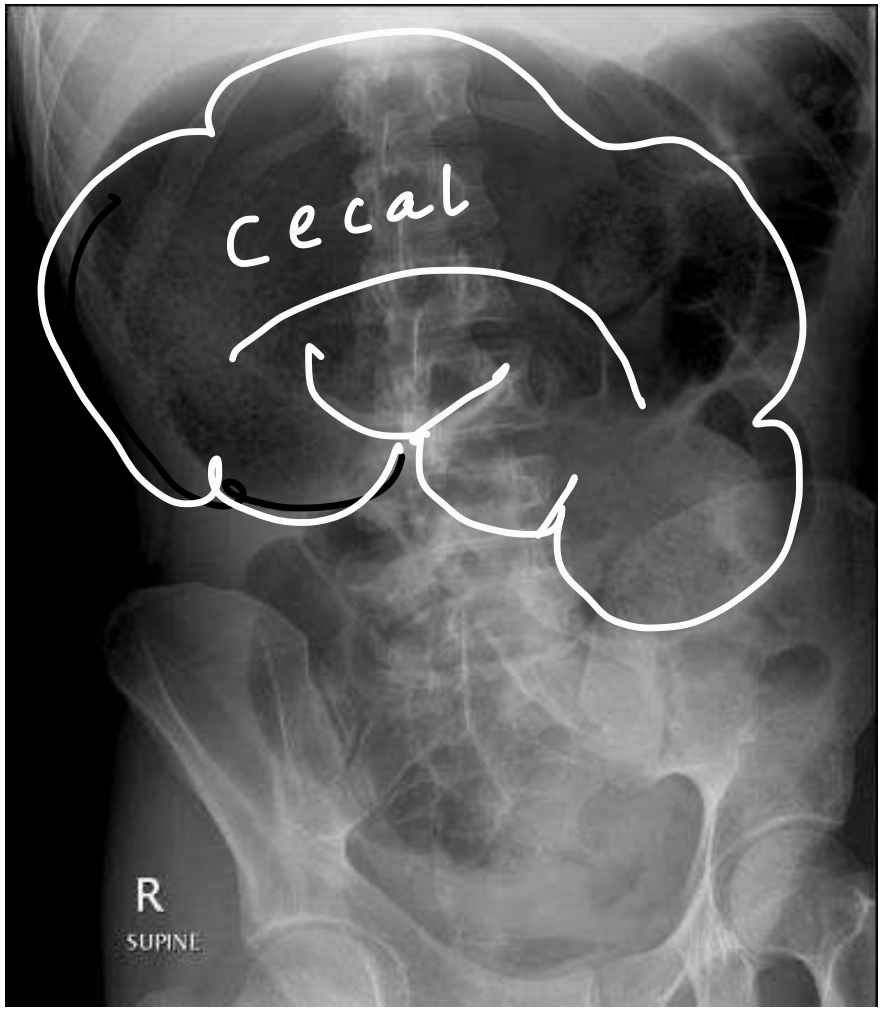
Extrapancreatic complications

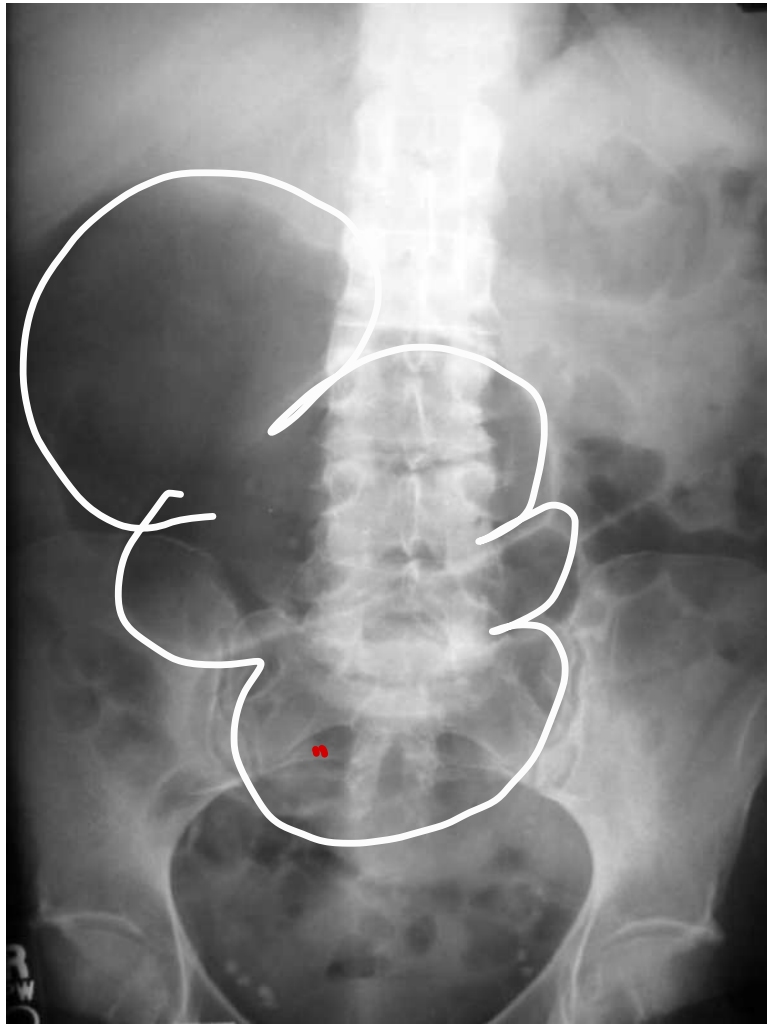
- 2 ... ascites, vascular complications, parenchymal complications ... involvement

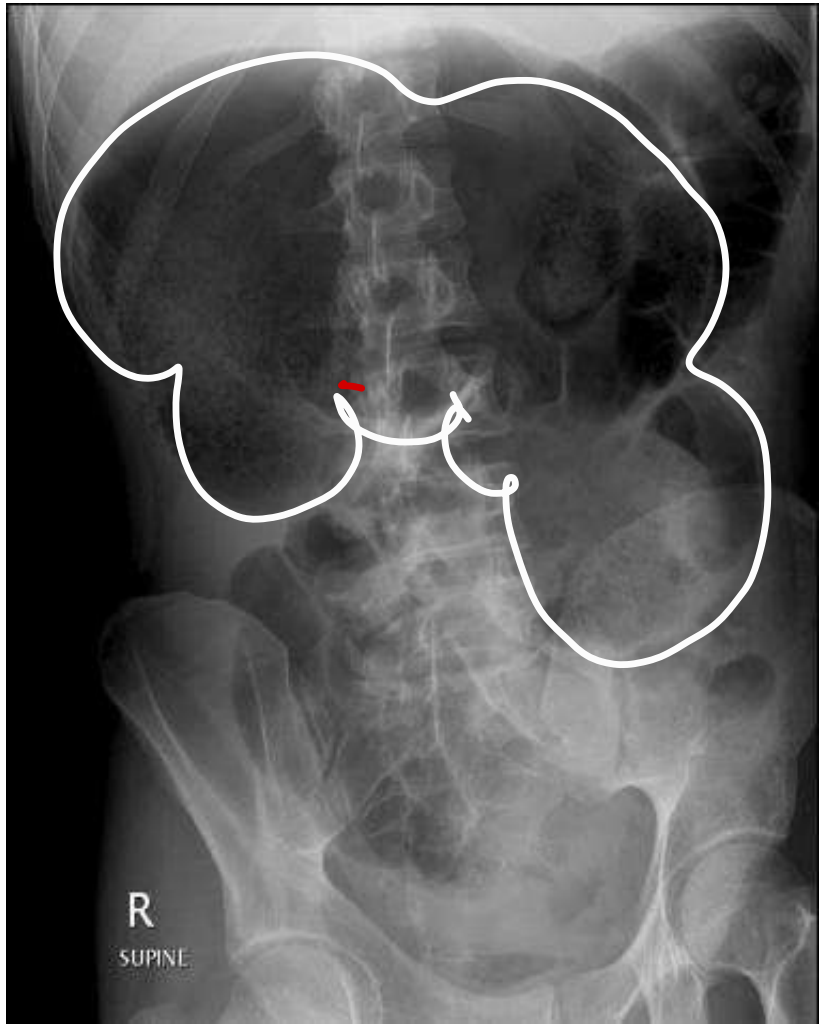
CASE-11

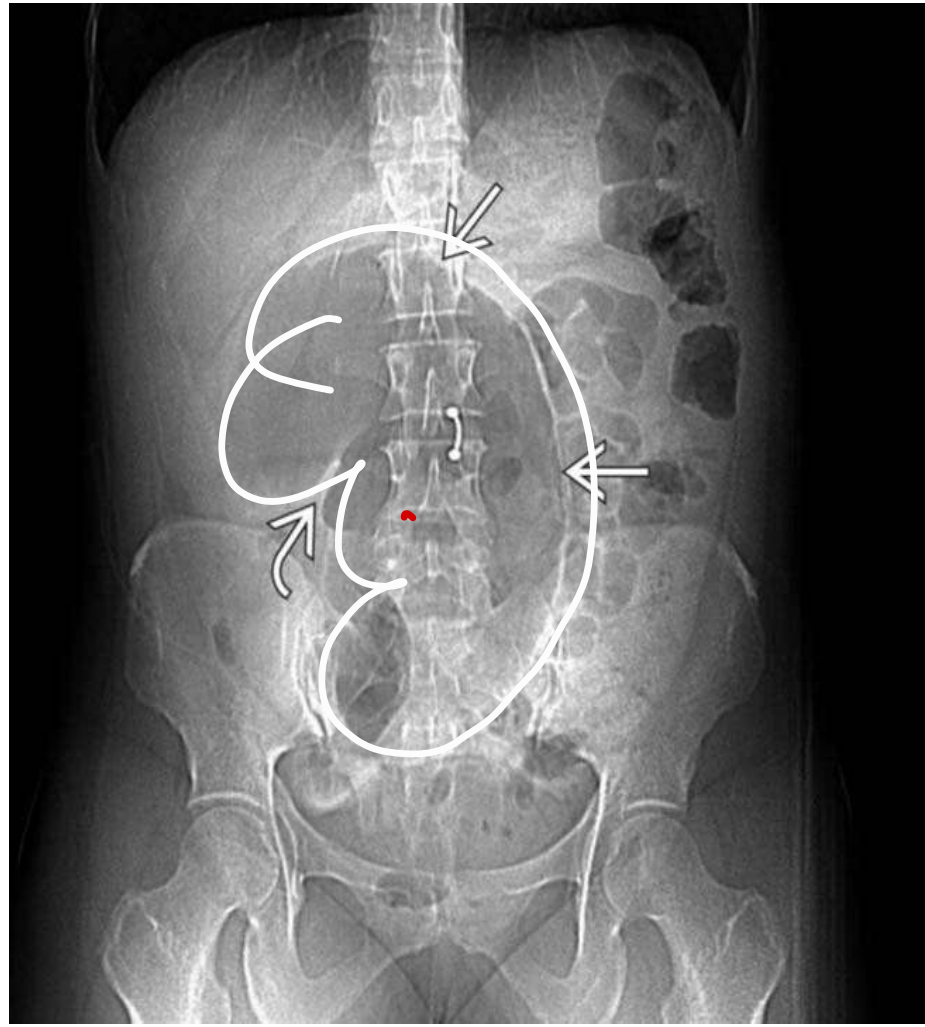
Colicky pain abdomen, Constipation, Abdominal distension, Vomiting
Likely diagnosis?

a) Cecal volvulus
b) Sigmoid volvulus
c) SBO
d) Internal hernia





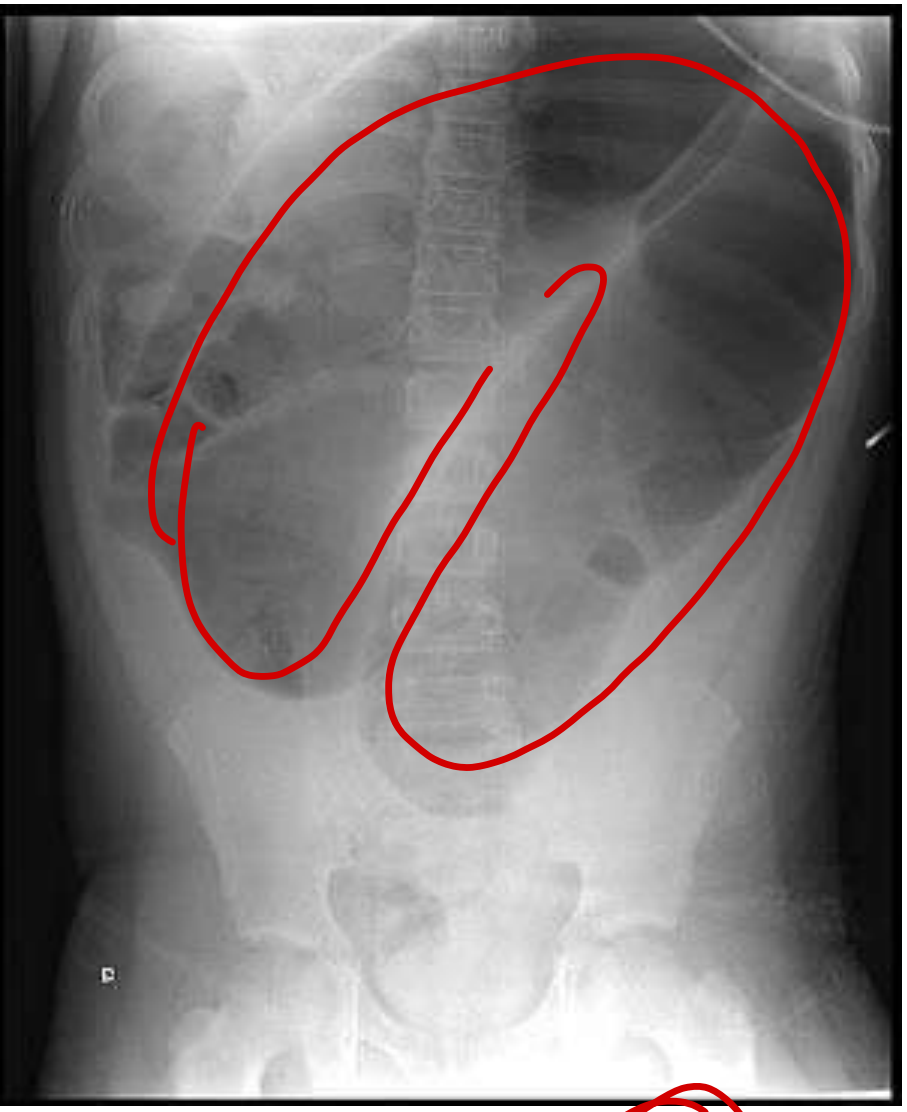


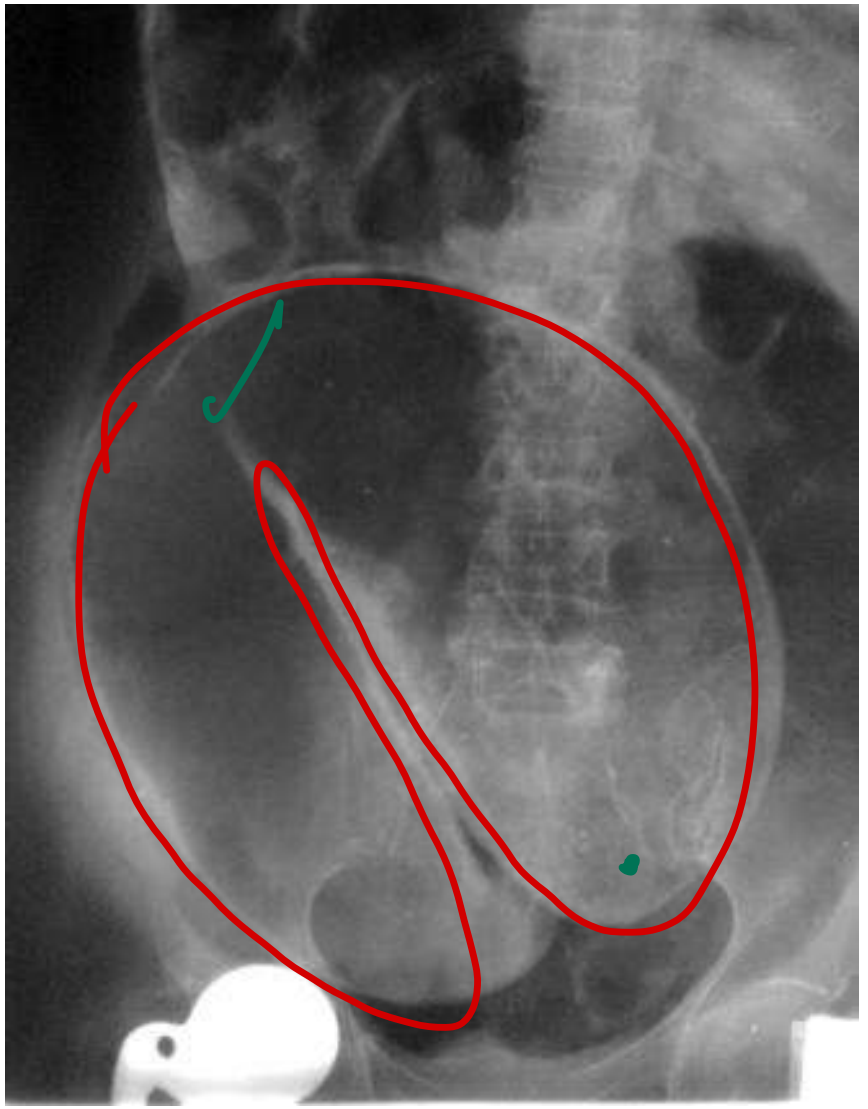


CV

1 loop

Haustrae (+)



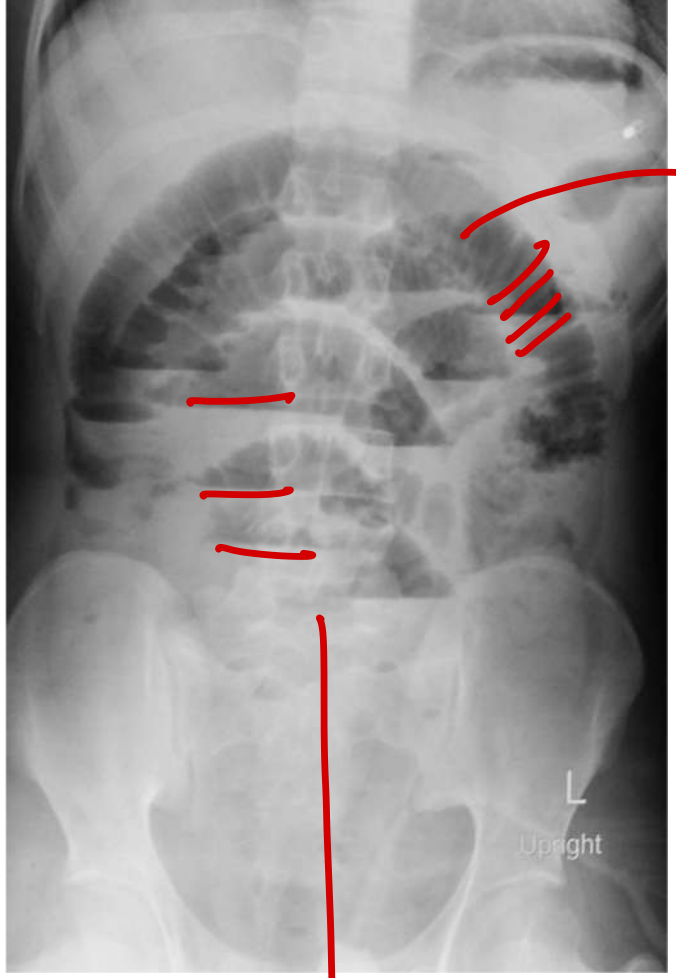


SV

× haustre

2 loops

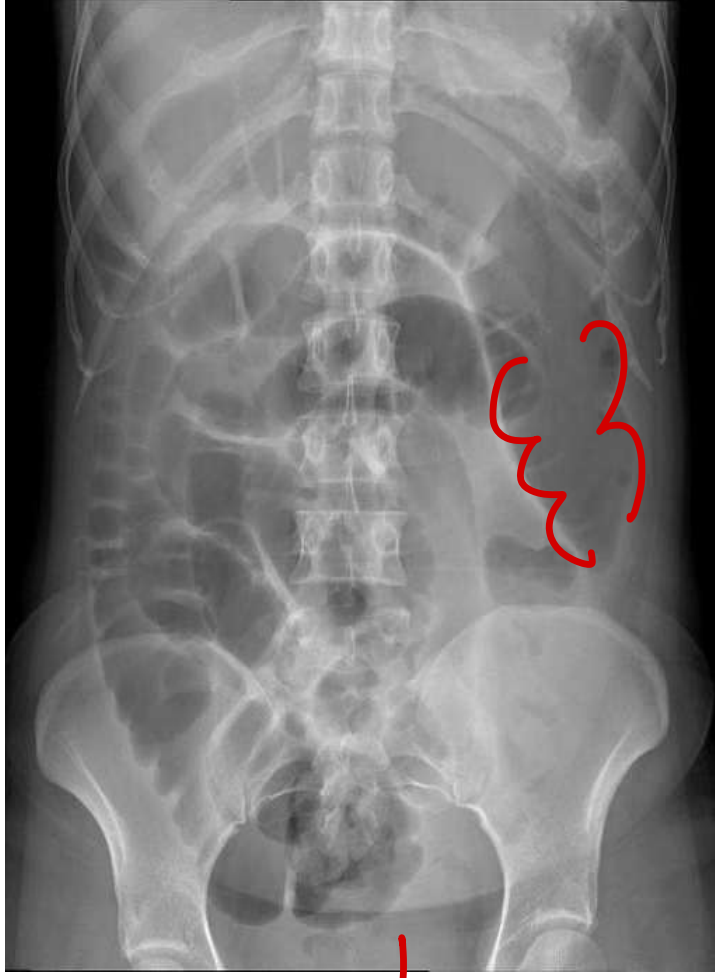
	Sigmoid volvulus	Cecal volvulus
Direction	anti-clockwise	clockwise
Predisposing factors	Chronic Constipn	Pregn / pelvic Sx
Starting from/Base	LLQ	RLQ
Apex	RUQ	LUQ
Number of loops	2	1
Associated bowel loop dilation	LB	SB
Haustrations in volvulus	x	✓
Mx	Flatus tube	Sx



jejunum

SBO

mec → prior Sx adhesions



LBO

mec - malignancy

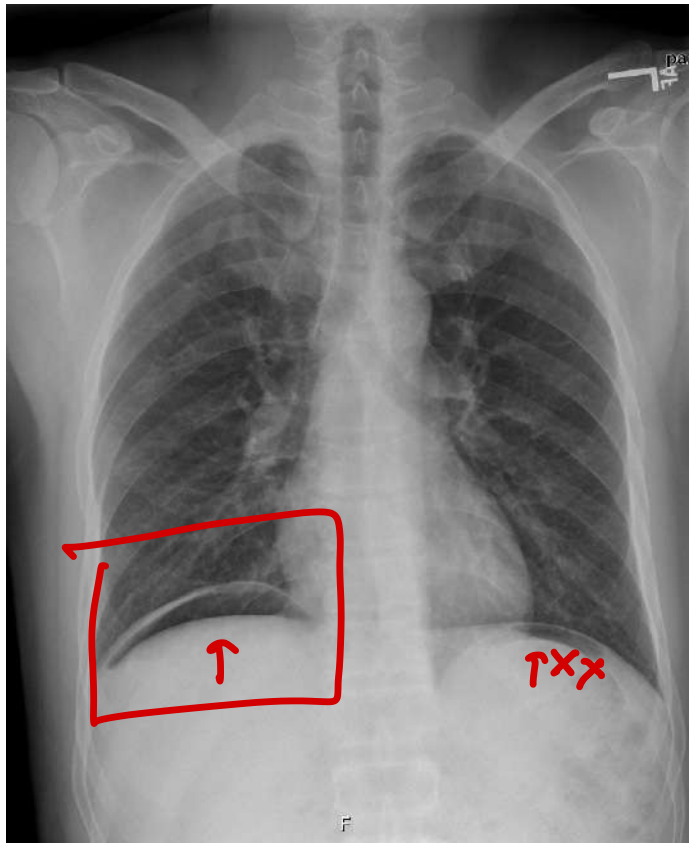
CASE-12

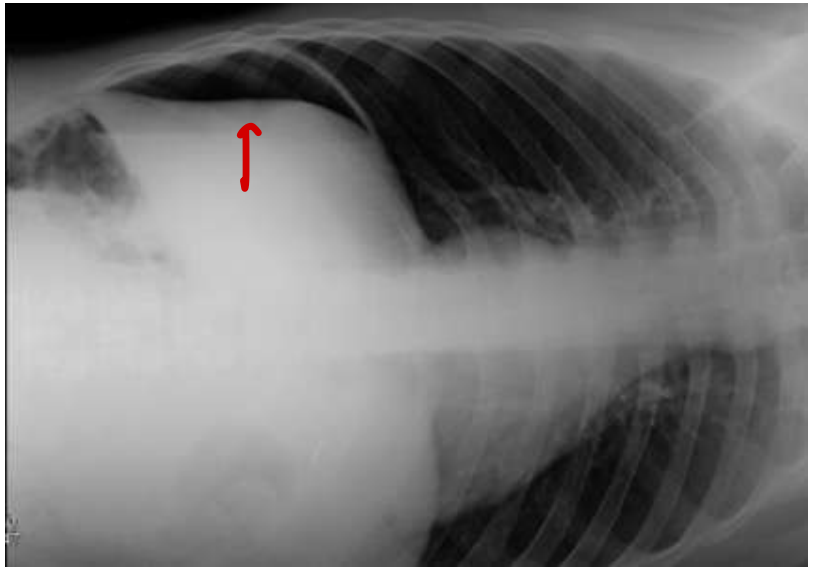
Young adult on NSAIDs
Severe pain abdomen with guarding
Next Ix:

a) CECT abdomen with oral contrast
b) CXR-PA erect
c) AXR
d) Barium meal

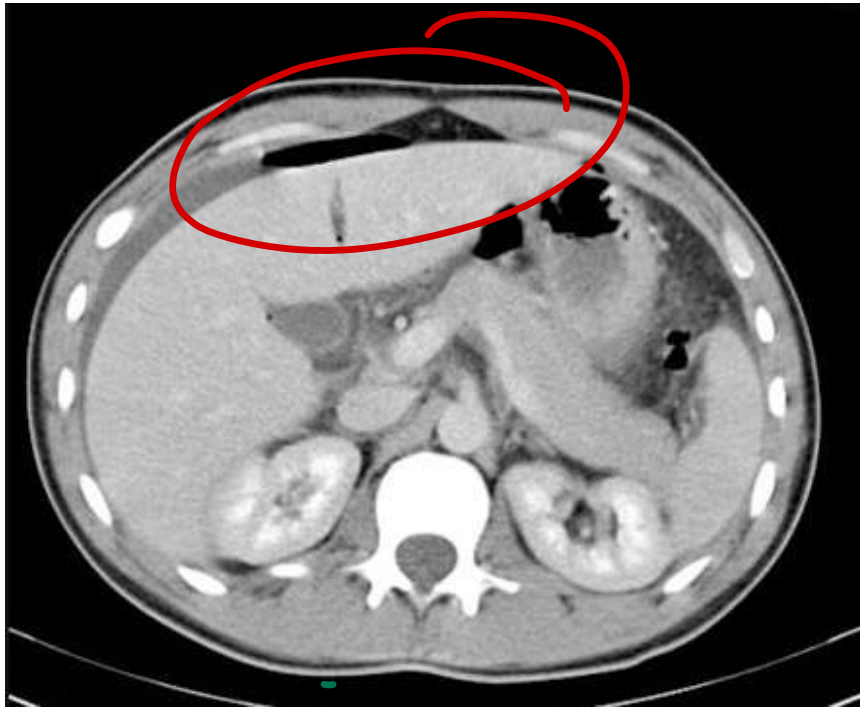
Next step- iv fluids → Sx
Most sensitive Xray- CXR- PA erect
Too sick to stand- Lt Lat decubitus
Most sensitive Ix- CECT
Contraindicated- BARIUM

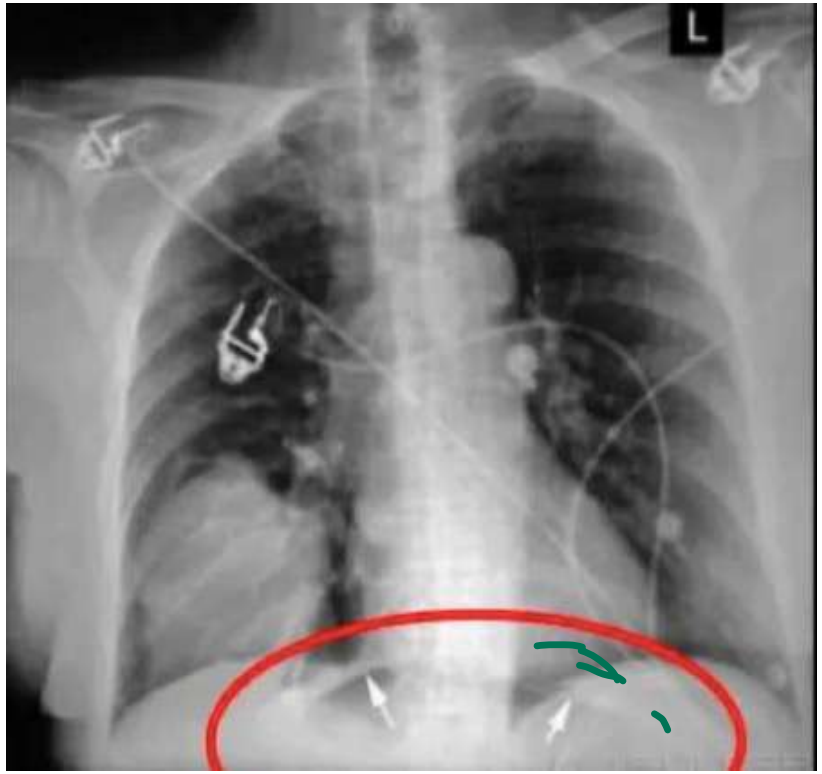
iodinated
Iohexol
gastrografin

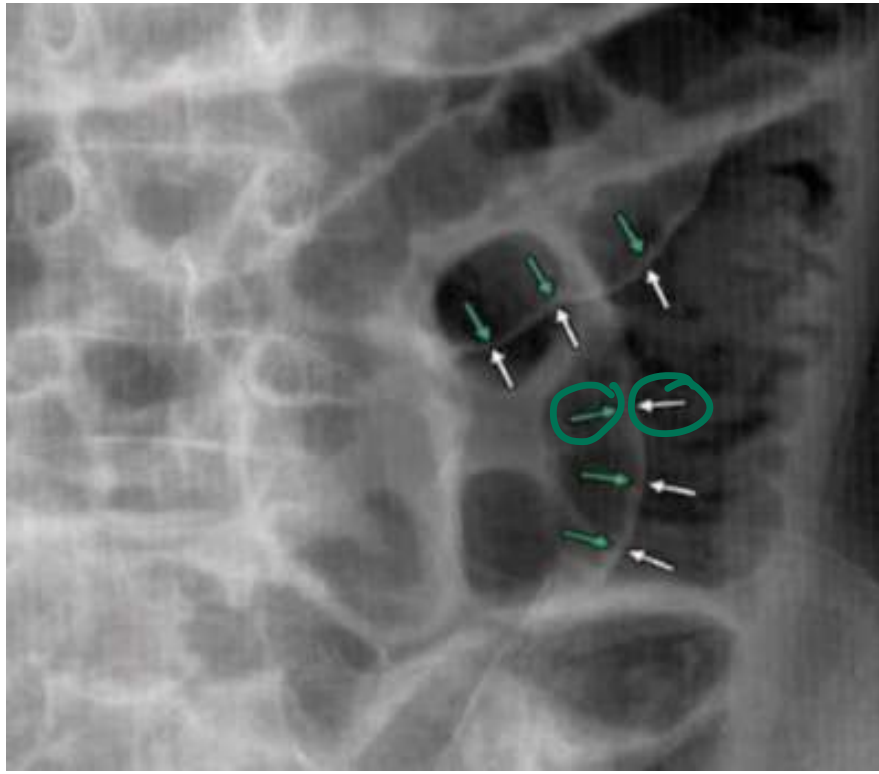




Lt lat decubitus







Cupulo sign

Rigler sign

Football sign

Supine

air

air

- Gallstone
- SBD
- Air – CBD

CASE-13

Fever, right upper abdominal pain, and jaundice : CHARCOT Δ
GGT, ALP high
Next Investigation:

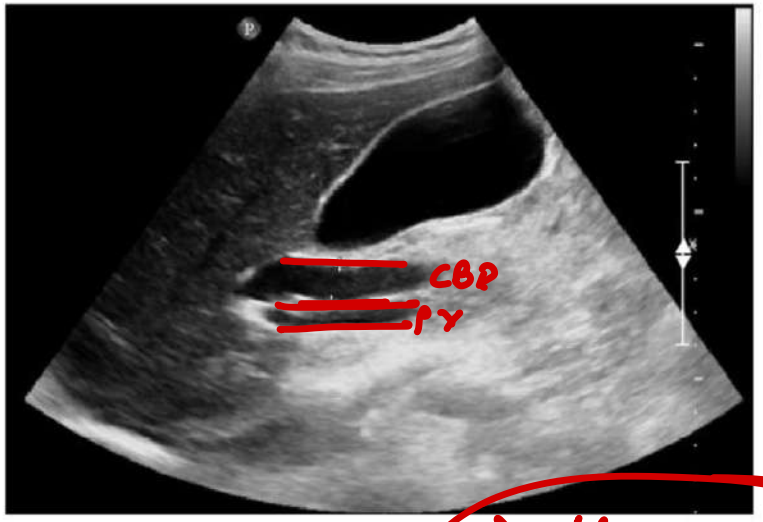
a) USG
b) MRCP
c) ERCP
d) Xray abdomen

Cholangitis

Reynold's - CNS
(Sepsis)

CBD

Initial- USG
IOC / best- MRCP
Gold standard- ERCP



USG

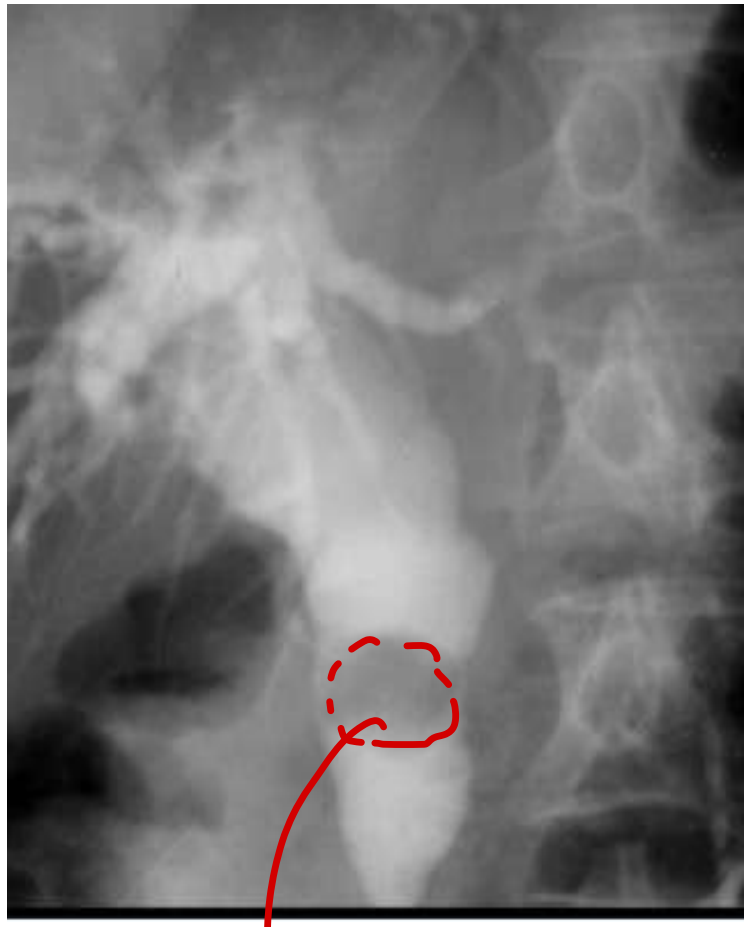
Double barrel

CBD dilated

>6mm

CBD stone

MRCP



ERCP

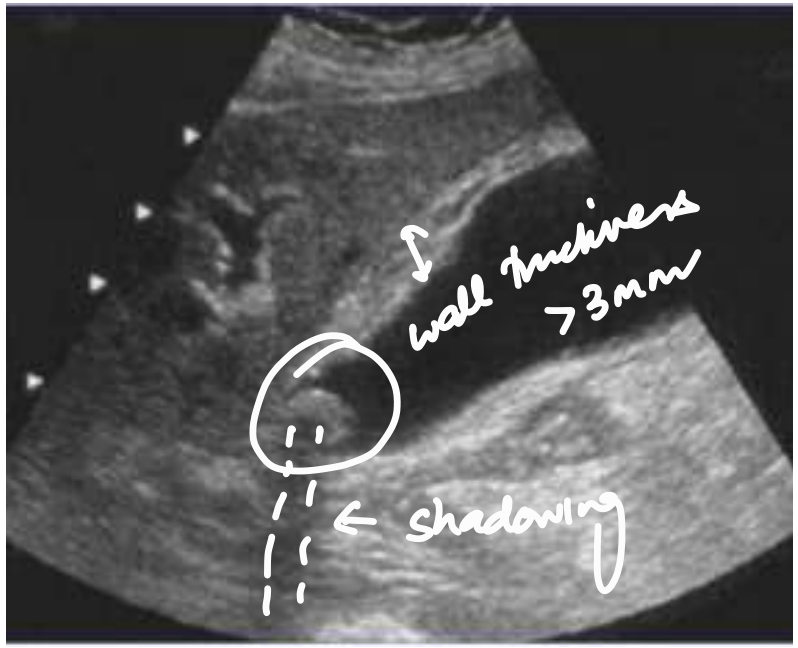
CASE-14

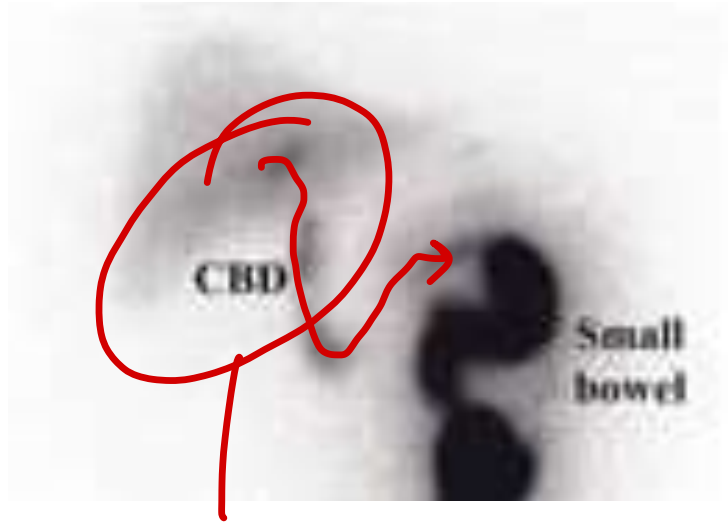
RUQ abdominal pain, Fever
GGT, ALP normal
Next Investigation:

Acute cholecystitis

a) USG
b) MRCP
c) ERCP
d) Xray abdomen

Initial- USG
IOC / best- USG
Most accurate- HIDA





non visualisation of GB

POLYP

cyst

+ → enhancement

TOKYO

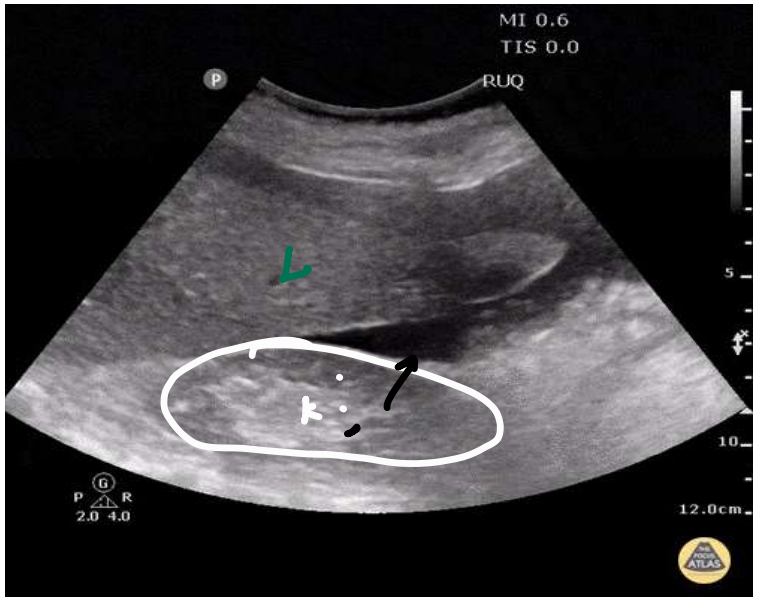
Severity	Criteria
Grade 1—Mild	• Acute cholecystitis not meeting other severity criteria • Mild gallbladder inflammation, no organ dysfunction
Grade 2—Moderate	Acute cholecystitis with any of the following but no organ/system dysfunction: • Elevated white blood cell count (>18,000/mL) • Palpable tender mass at right upper quadrant • Duration of complaints exceeding 72 h • Marked local inflammation (such as biliary peritonitis, pericholecystic abscess, hepatic abscess, gangrenous cholecystitis, emphysematous cholecystitis)
Grade 3—Severe	Acute cholecystitis with dysfunction of any one of the following organs/systems: • Cardiovascular dysfunction (hypotension requiring treatment with dopamine > 5 mg/kg/min of body weight or any dose of norepinephrine) • Neurological dysfunction (decreased levels of consciousness) • Respiratory dysfunction (ratio of $PaO_2/FiO_2 < 300$) • Renal dysfunction (oliguria, creatine > 2.0 mg/dL) • Hepatic dysfunction (PT-INR > 1.5)

MODS

CASE-15

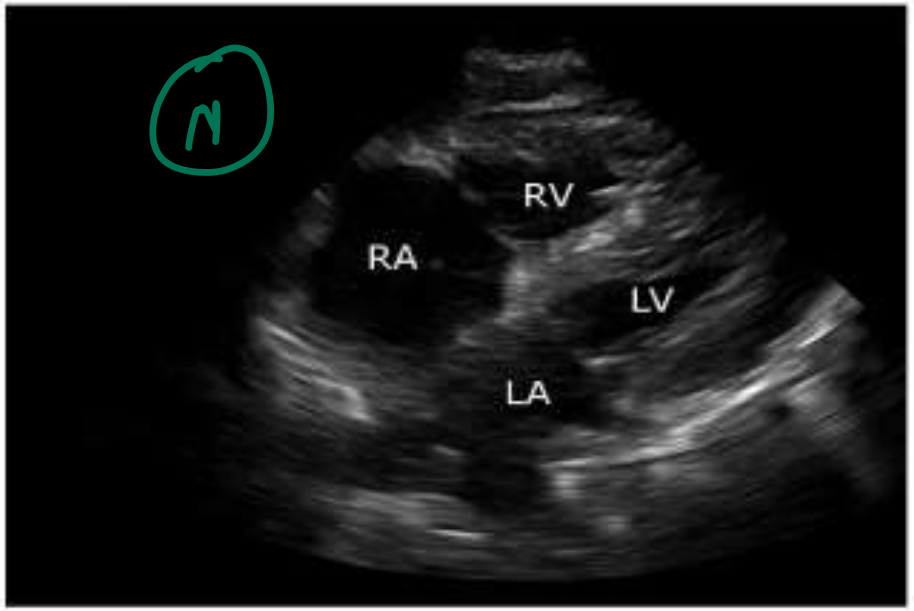
RTA with Abdominal tenderness
BP-105/70mm Hg, Pulse-90 bpm
Next step:

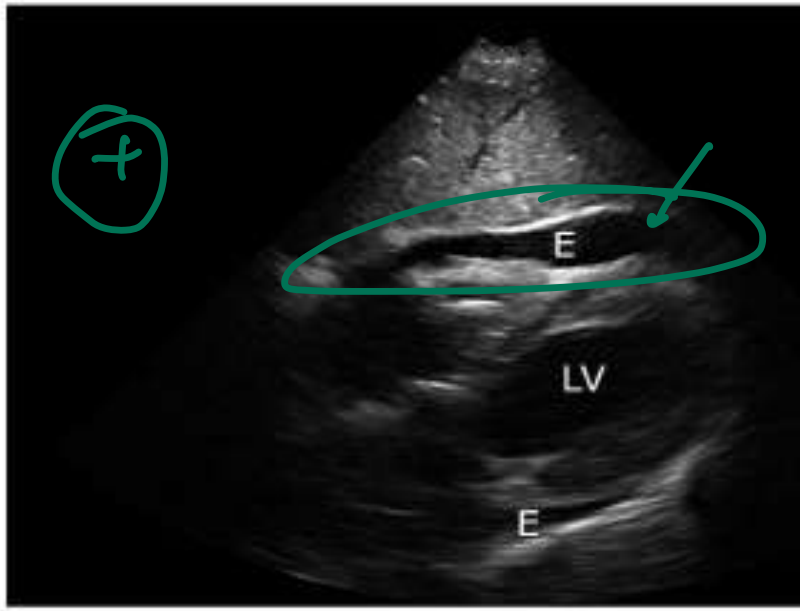
a) Exploratory laparotomy
b) eFAST
c) CECT
d) MRI

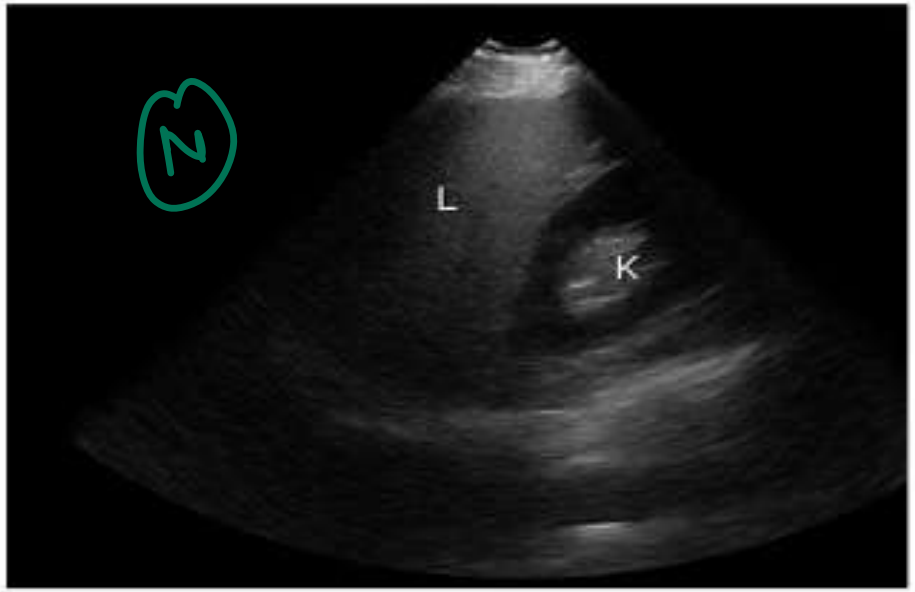


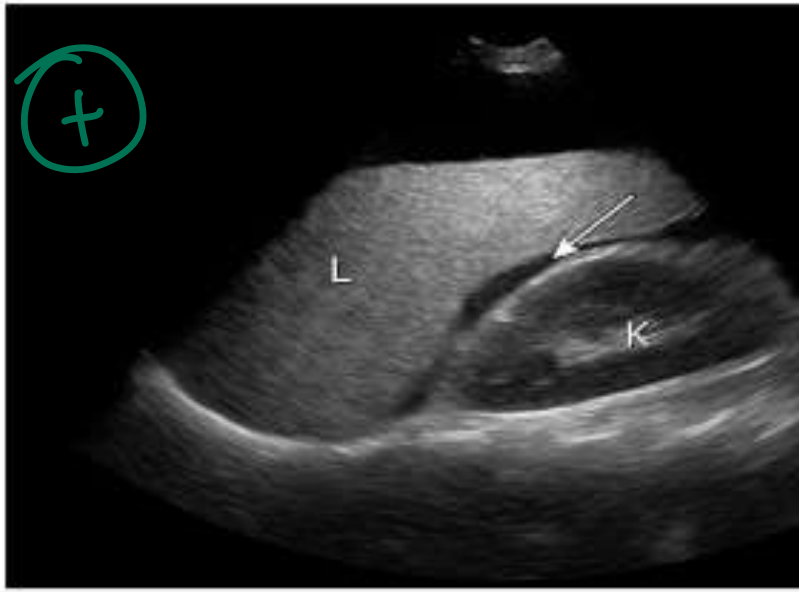
eFAST has limited role in evaluation of all except:

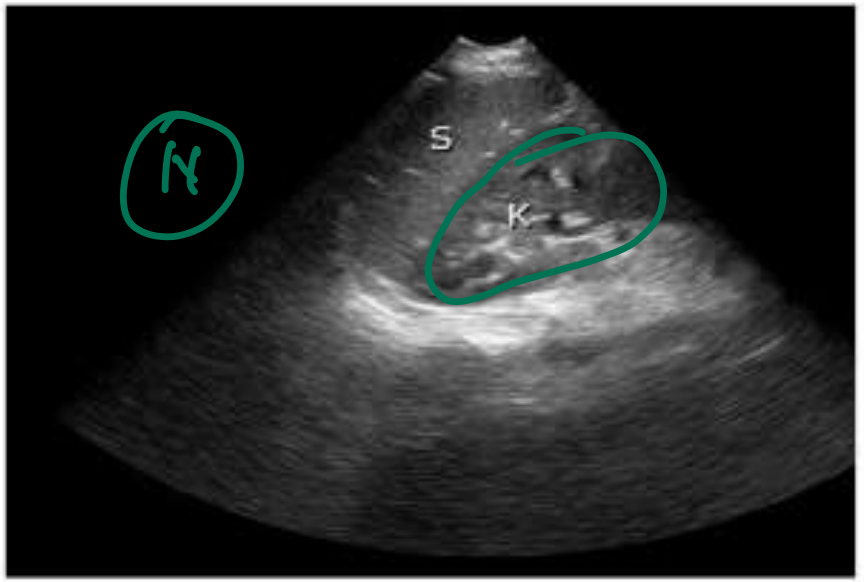
a) Renal injury
b) Bowel injury
c) Diaphragm injury
d) Retroperitoneal hematoma

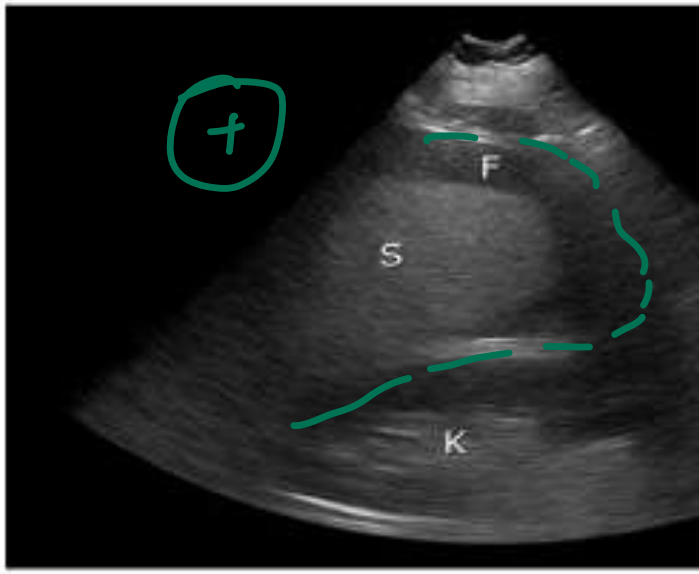


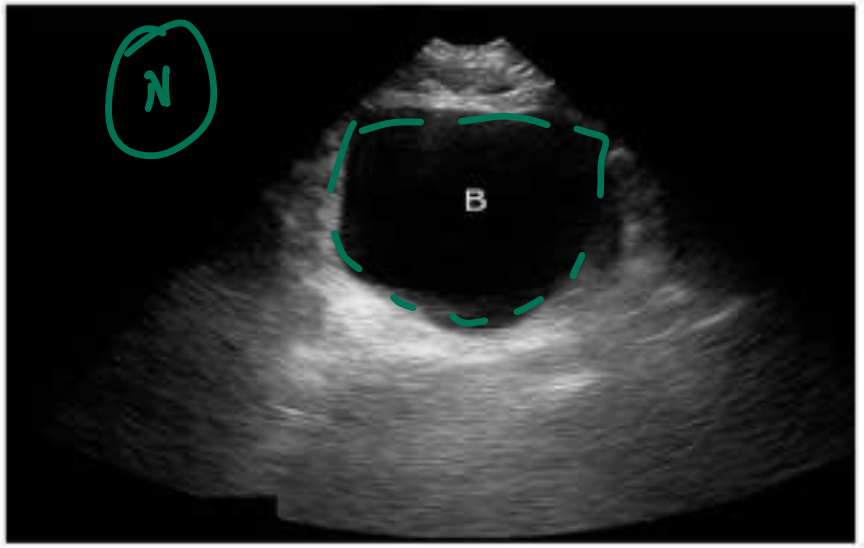


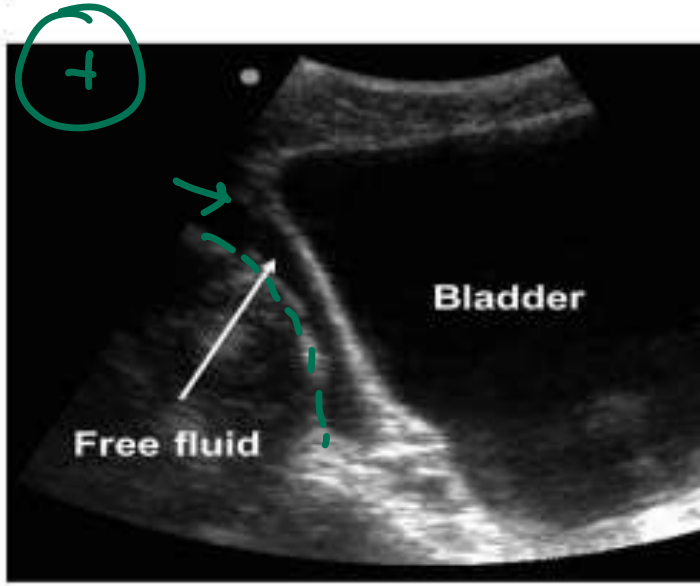


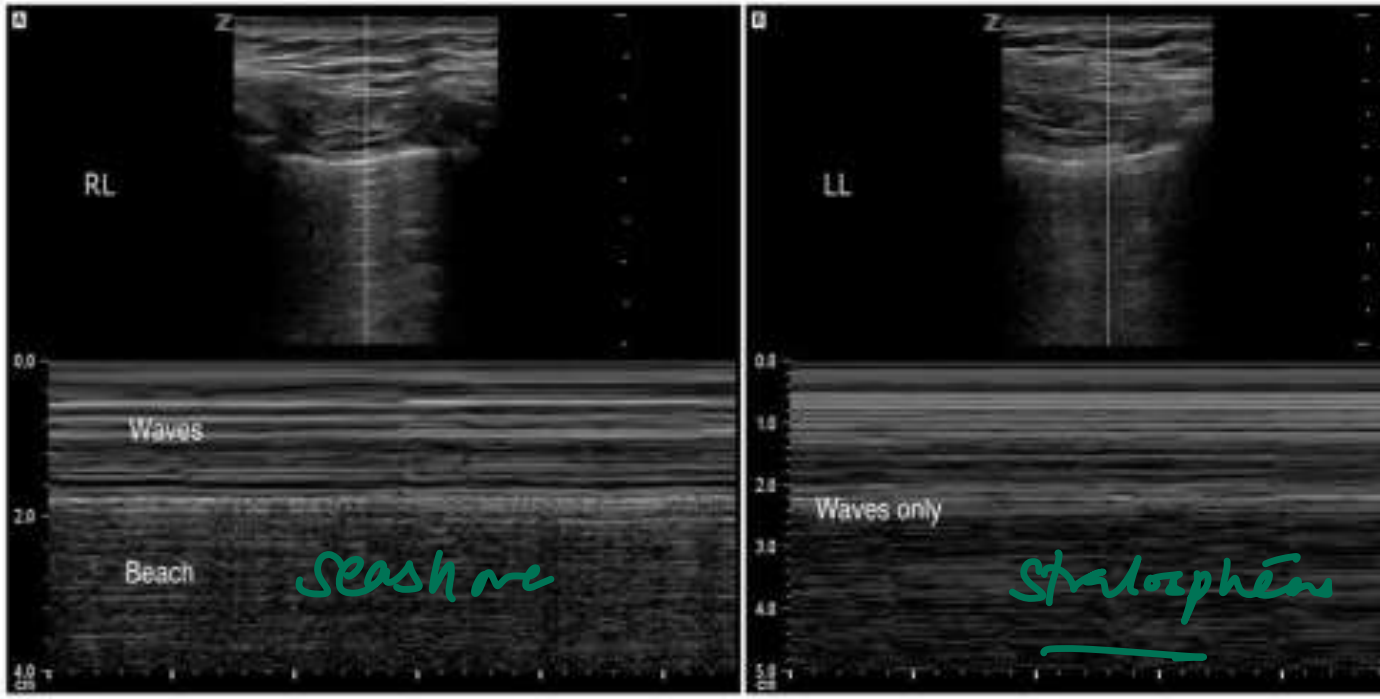


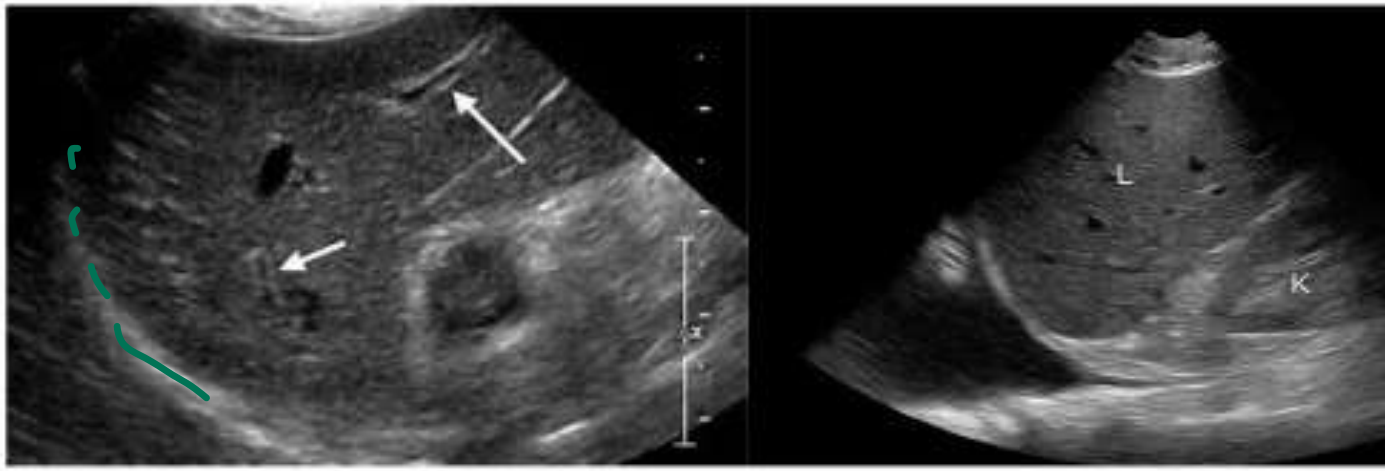












CASE-16

A 60-year-old male with a history of cirrhosis secondary to alcohol abuse presents to the emergency department with confusion and altered mental status. His wife reports that he has been increasingly forgetful and disoriented over the past week. On examination, he is lethargic with asterixis and slurred speech. Laboratory tests show elevated ammonia levels. Which of the following pathophysiological mechanisms is primarily responsible for the patient's altered mental status?

A) Increased ammonia production in the liver
B) Decreased ammonia metabolism in the kidneys
C) Elevated levels of glutamine in the brain
D) Impaired neurotransmitter synthesis in the brain

Hepatic encephalopathy

NH_3

Glutamate

Excitatory

Glutamine

astrocyte

neuronal edema

West Haven

Grade	Level of consciousness	Personality and intellect	Neurologic signs	Electroence-phalogram (EEG)
1	Day/night sleep reversal, restlessness	Forgetfulness mild confusion, agitation, irratibility	Tremor, apraxia, incoordination, impaired handwriting	
2	Lethargy, slowed response	Disorientation to time, loss of inhibition, inappropriate behavior	Asterixis, dysarthria, ataxia, hypoactive reflexes	
3	Somnolence, confusion	Disorientation to place, aggressive behavior	Asterixis, muscular rigidity, Babinski signs, hyperactive reflexes	Triphasic waves (5 Hz)
4	Coma	None	Decerebration	Delta/slow wave activity

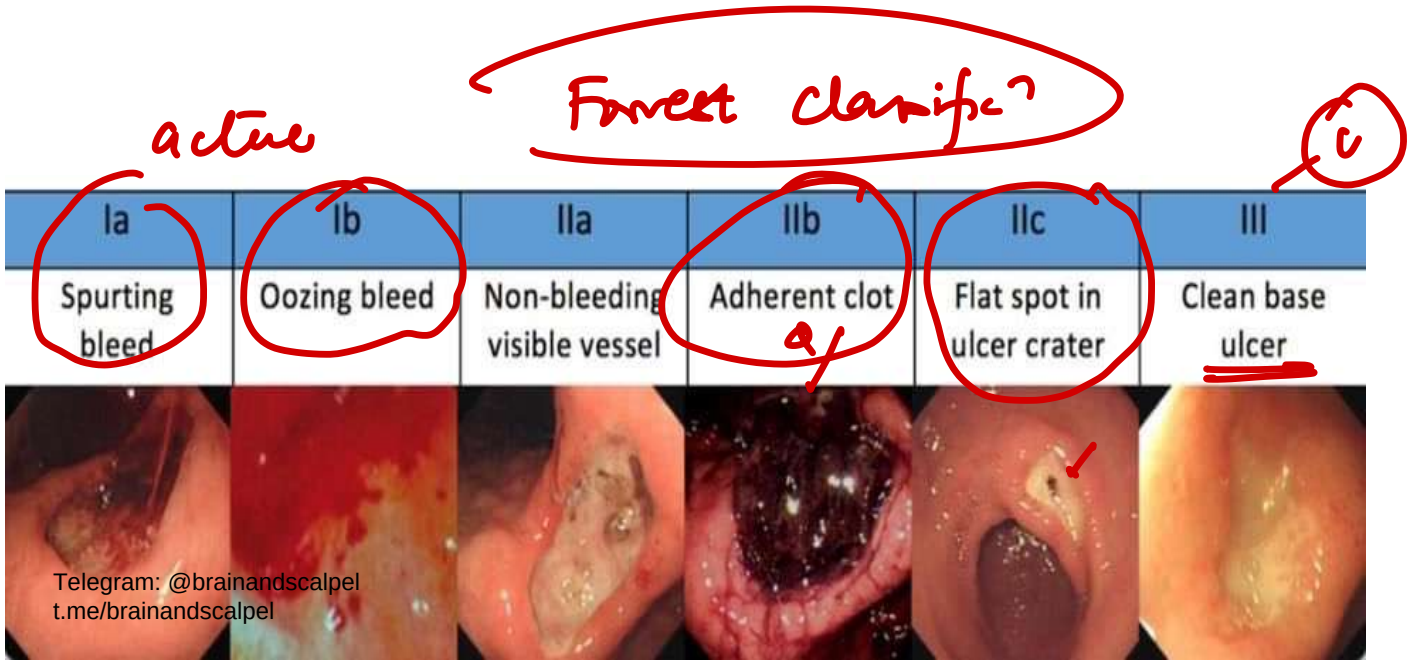
CASE-17

A 65-year-old male presents to the emergency department with hematemesis and melena. He has a history of peptic ulcer disease and is hemodynamically stable. What is not an appropriate next step in the management of this patient?

A) Initiate intravenous proton pump inhibitor therapy
B) Perform urgent upper endoscopy
C) Administer intravenous eryhtromycin
D) Begin oral propranolol

PUD > variceal

→ UGIE (30min) - prokinetic



ROCKALL SCORE

Variables	Responses	Scores
Age (in years)	< 60	0
	60-79	1
	>80	2
Shock	No shock	0
	Tachycardia (SBP > 100 mmHg, Pulse > 100 beats/minute)	1
	Hypotension (SBP < 100 mmHg, Pulse > 100 beats/minute)	2
Co-morbidity	None	0
	Cardiac failure, IHD, any major co-morbidity	2
	Renal/liver failure, metastatic malignancy	3
Diagnosis (post-endoscopy)	Mallory-Weiss tears	0
	All other diagnoses	1
	Malignancy of the upper GI tract	2

CASE

Approach to UGI bleed

VARICEAL

Resuscitation

DOC- Terlipressin
MC- Octreotide
Not used- PROPRANOLOL

UGIE → Banding / sclerotherapy

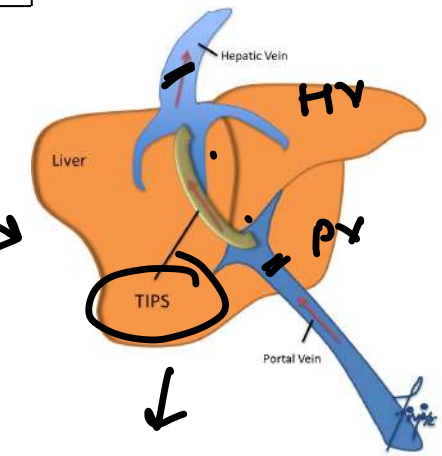
Prophylaxis

No bleed

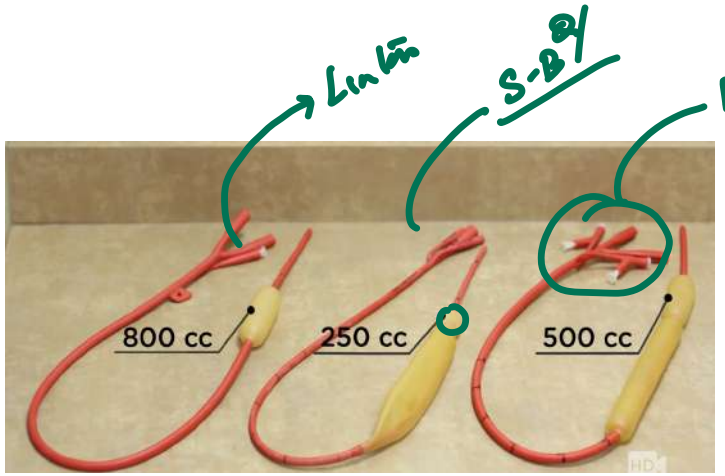
Propranolol

Re-bleed

UGIE



Liver transplant



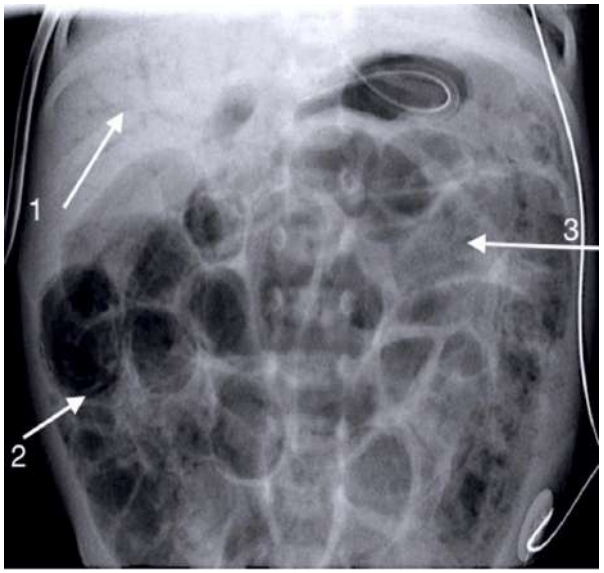
Stent (transjugular)

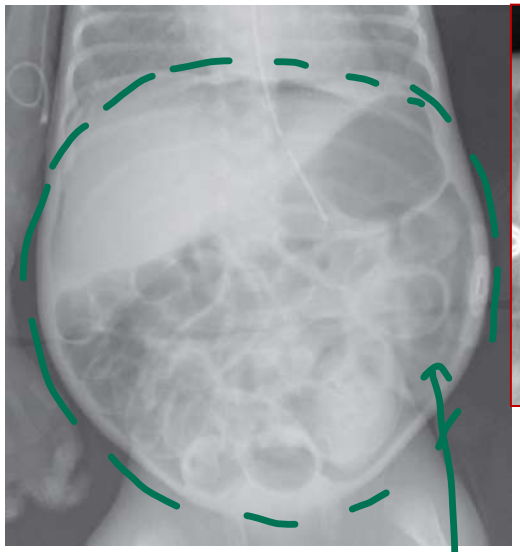
MC early complication- Capsular rupture
MC late complication- Hepatic encephalopathy

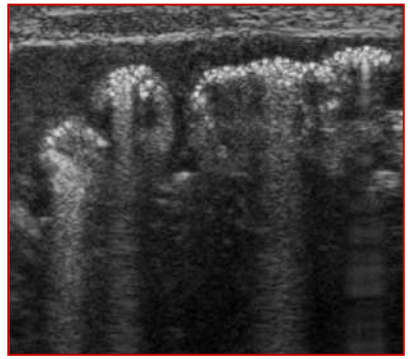
CASE SCENARIO-18

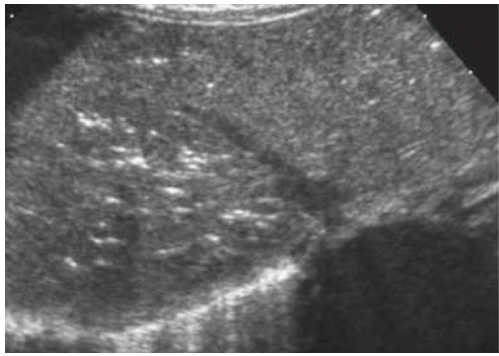
NEC

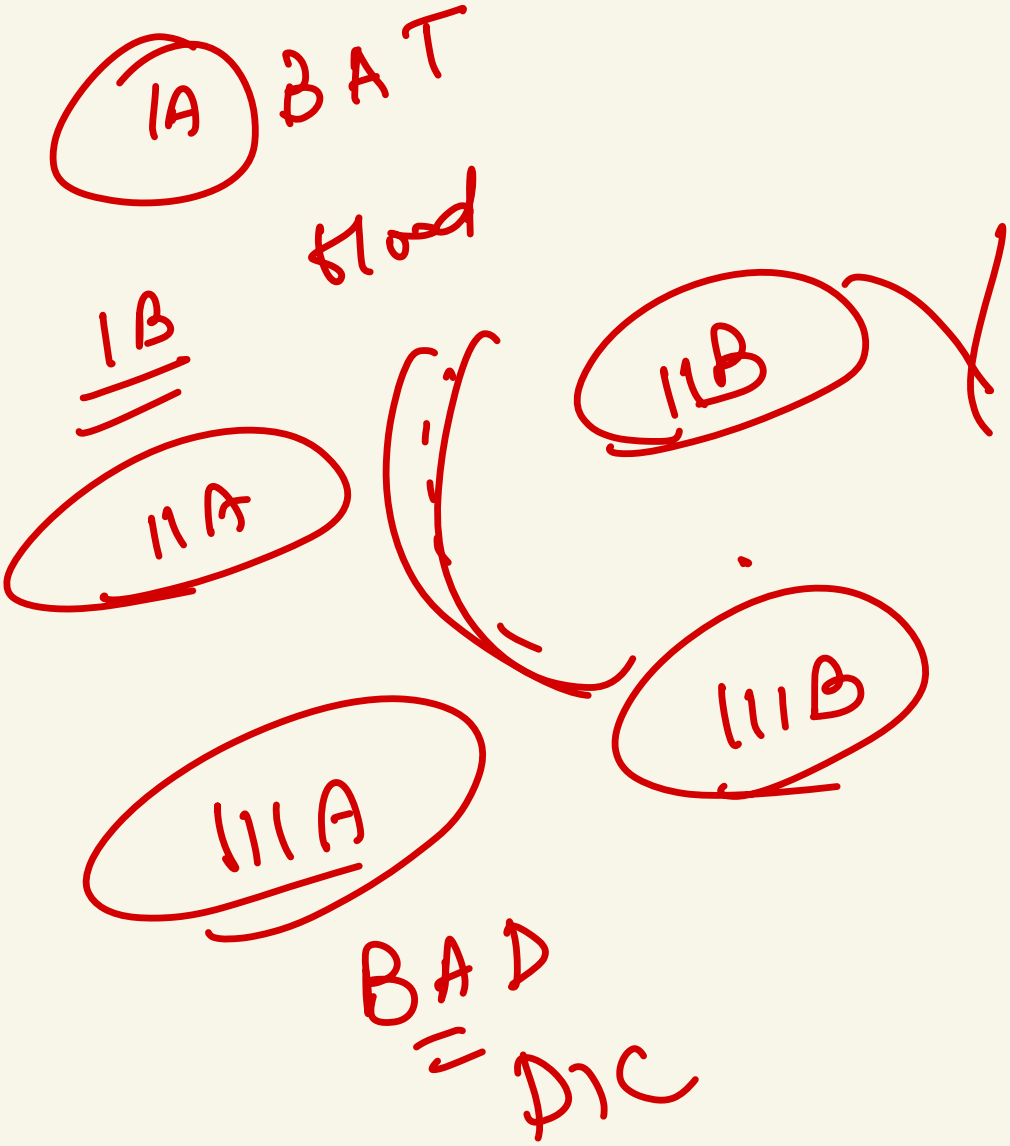
Preterm baby on artificial feeding presented with vomiting, bloody stools, lethargy, incessant cry











NEC

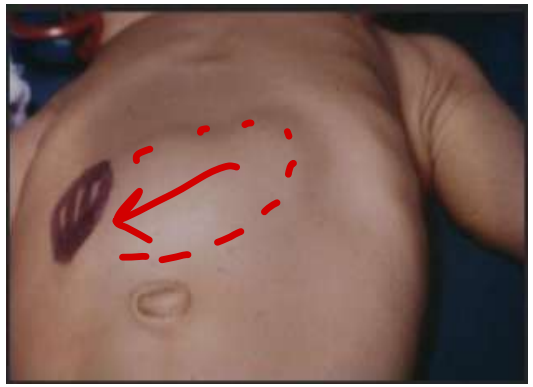
Mod. Bell's

Stage	Systemic Signs	Treatment
IA	Bradycardia, Apnea, Temperature instability	NPO, antibiotics 3 days
IB	Grossly bloody stool	Same as IA
IIA	Absent bowel sounds Pneumatosis intestinalis	NPO, antibiotics 7 to 10 days
IIB	Metabolic acidosis, Thrombocytopenia PV gas	NPO, antibiotics 14 days
IIIA	Bradycardia Apnea, Acidosis DIC	NPO, antibiotic 14 days, fluid resuscitation, inotropic support
IIIB	Pneumoperitoneum	Surgery

CASE SCENARIO-19

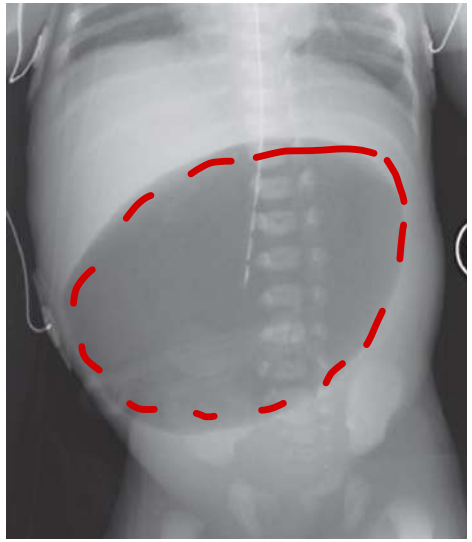
CHPS

Projectile episodes of non-billious vomiting 30-60 minutes after feeding, Weight loss, Persistent hunger

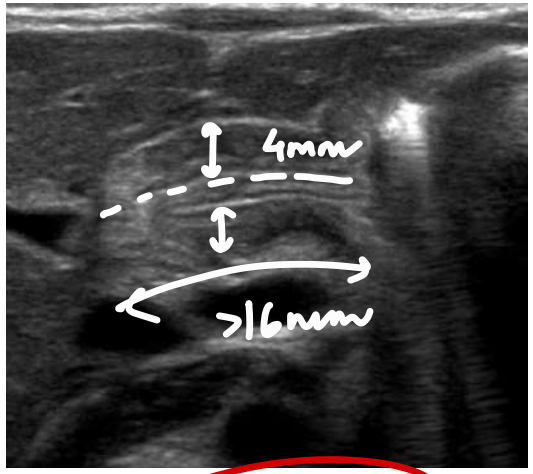


olive

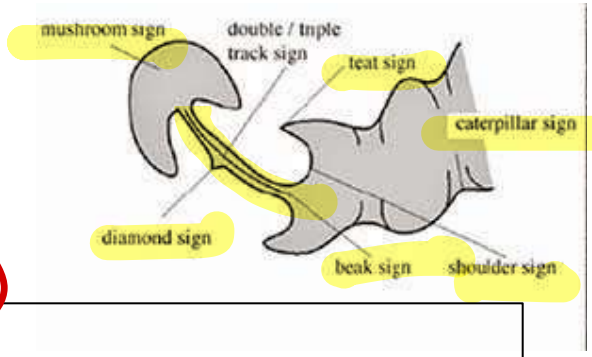
L-R



single bubble



IOC - USG



POEM

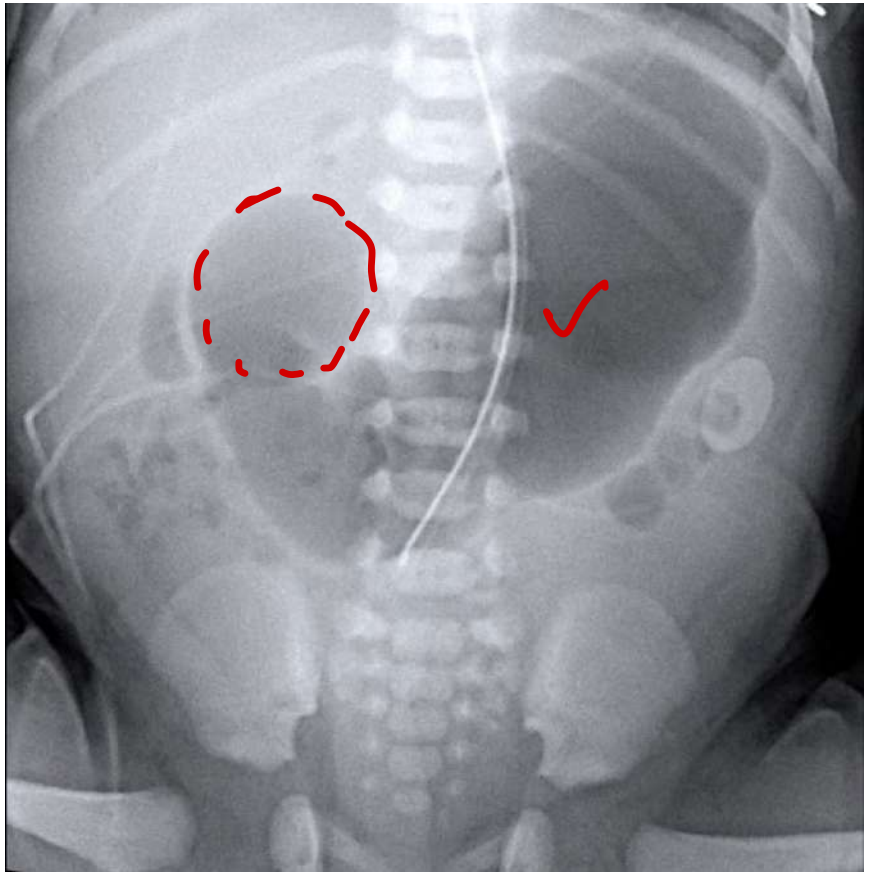
Diagnosis: CHPS

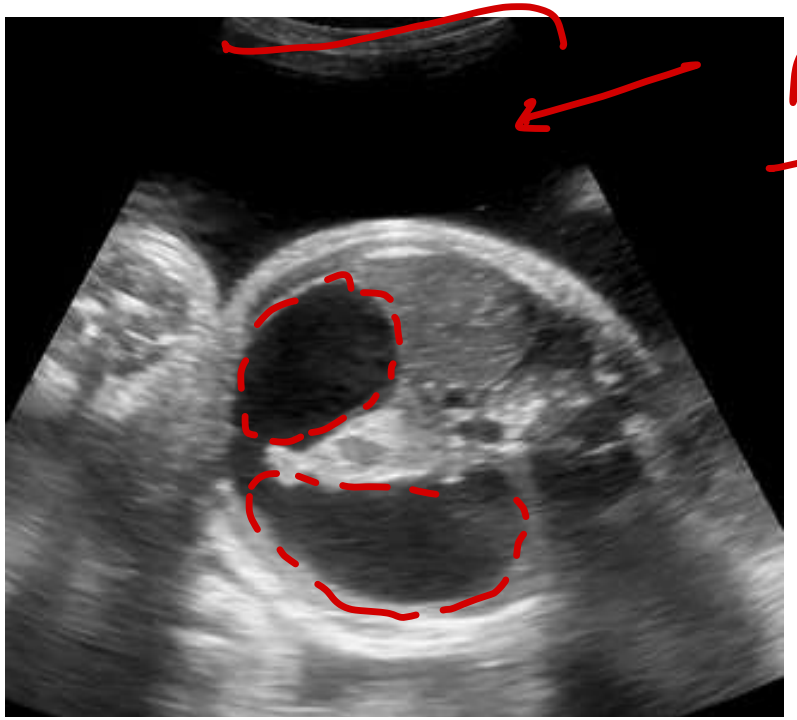
Management:

↓Na ↓K ↓Cl^- metab alkalosis ± paradoxical aciduria → Ramstedt Pyloromyotomy

CASE SCENARIO-20

Newborn presented with bilious vomiting, abdominal distension with incessant cry



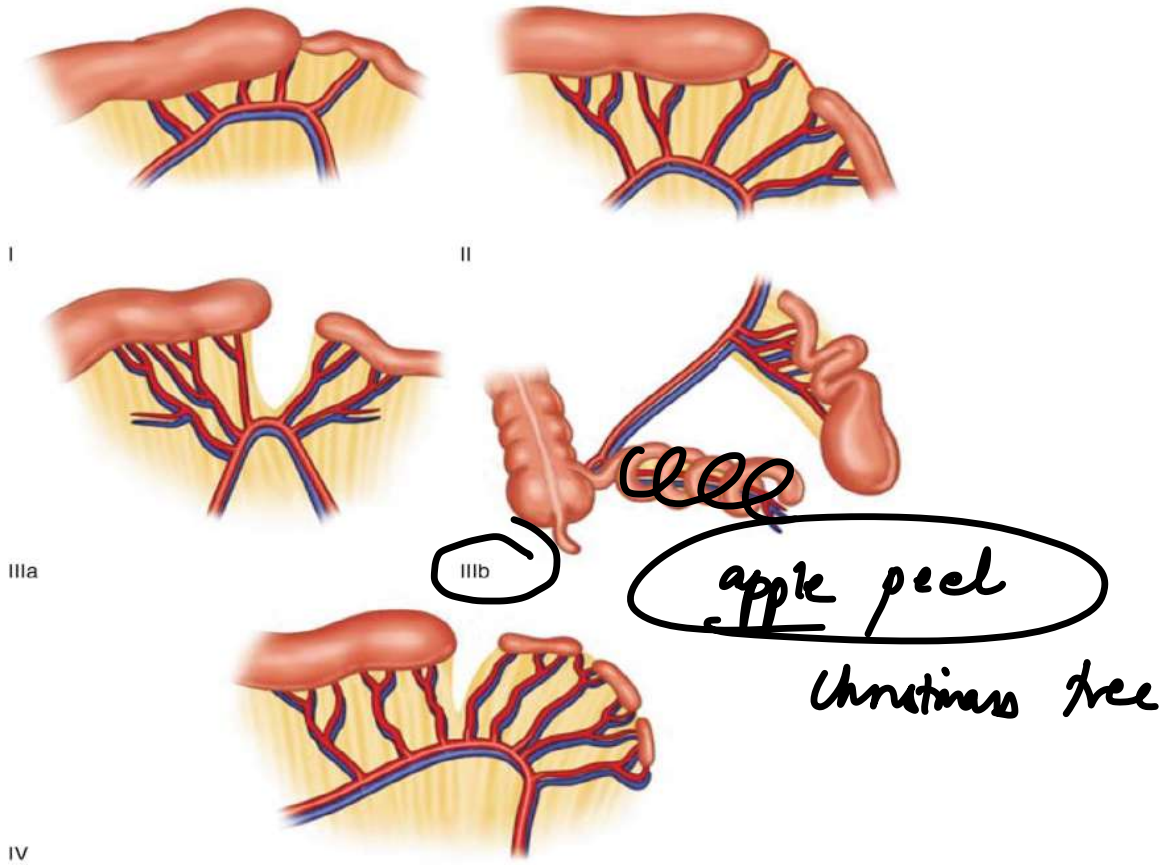


Duodenal atresia

CASE SCENARIO-21

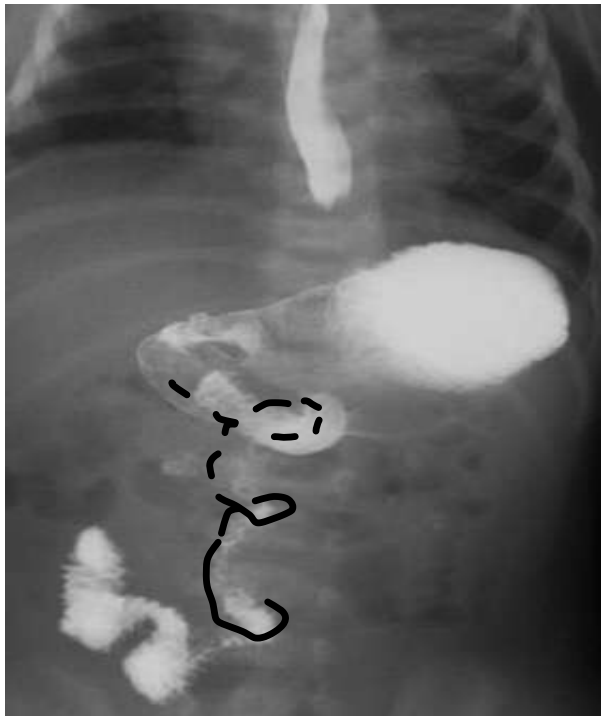
Newborn presented with bilious vomiting, abdominal distension with incessant cry

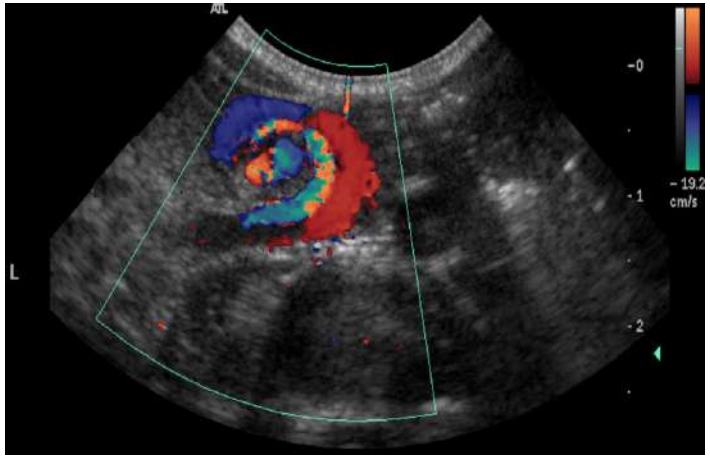
jejunal atresia



CASE SCENARIO-22

4 weeks old boy presented with bilious vomiting, abdominal distension with incessant cry





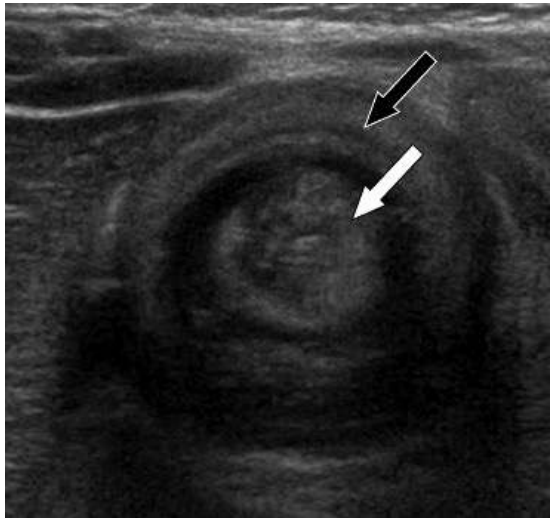
Diagnosis: Midgut volvulus (i malrotn)

Management: Sx - Ladd procedure

CASE SCENARIO-23

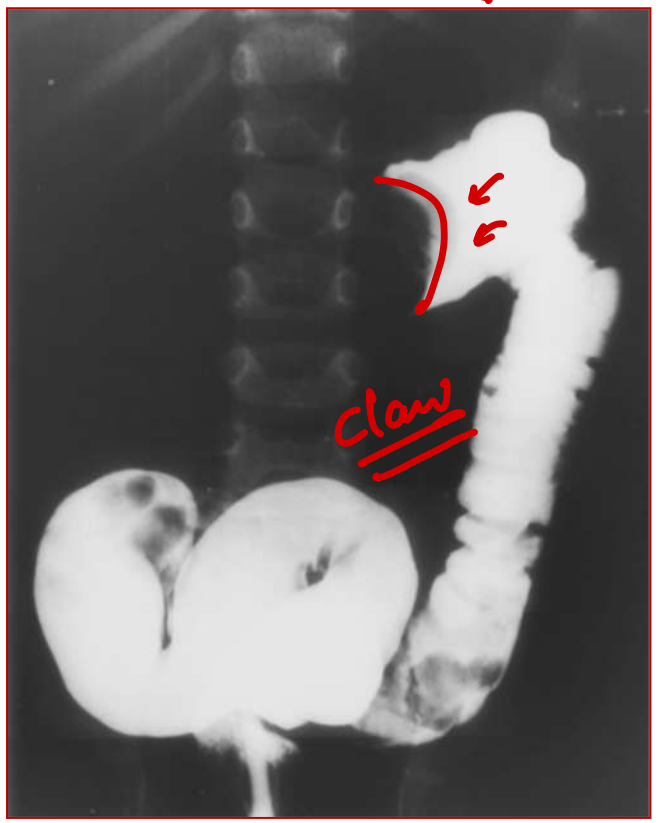
Intussuscep^{n}

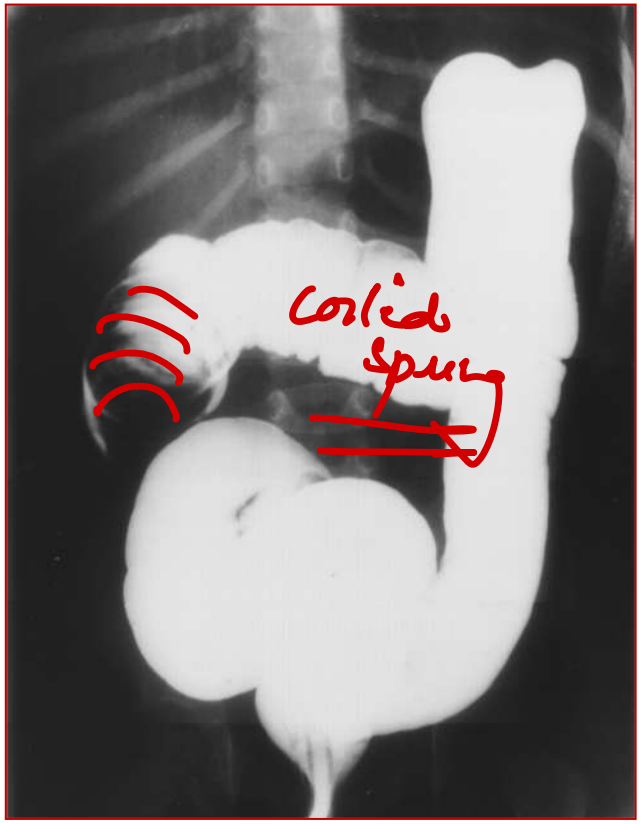
7 months old baby , after Rotavirus vaccination presented with bloody stools, vomiting, incessant cry



Initial : USG

target/ donut sign





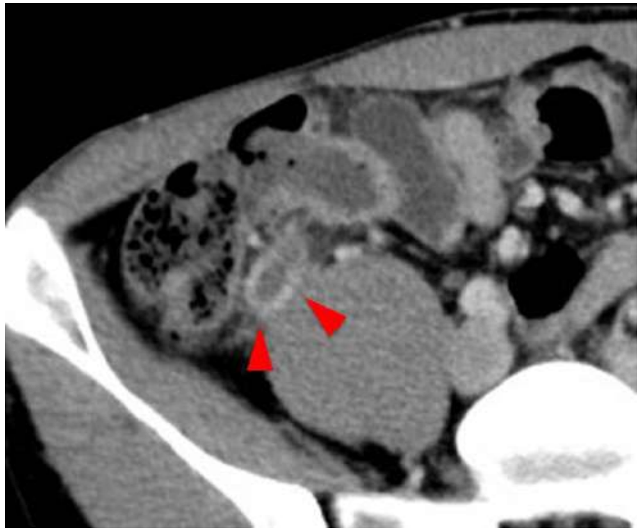
Ba enema - Gold std

// dx + tx

CASE SCENARIO-24

8 year old child with peri-umbilical pain and vomiting with mild fever

AP >6mm



Alvarado score	
Feature	**Score**
Migration of pain	1
Anorexia	1
Nausea	1
Tenderness in right lower quadrant	2
Rebound pain	1
Elevated temperature	1
Leucocytosis	2
Shift of white blood cell count to the left	1
Total	**10**

Initial: USG → N / equivocal → IOC: CECT

USG → Sx

muscle splitting: Gridiron

muscle cutting: Rutherford

cosmesis: Lanz

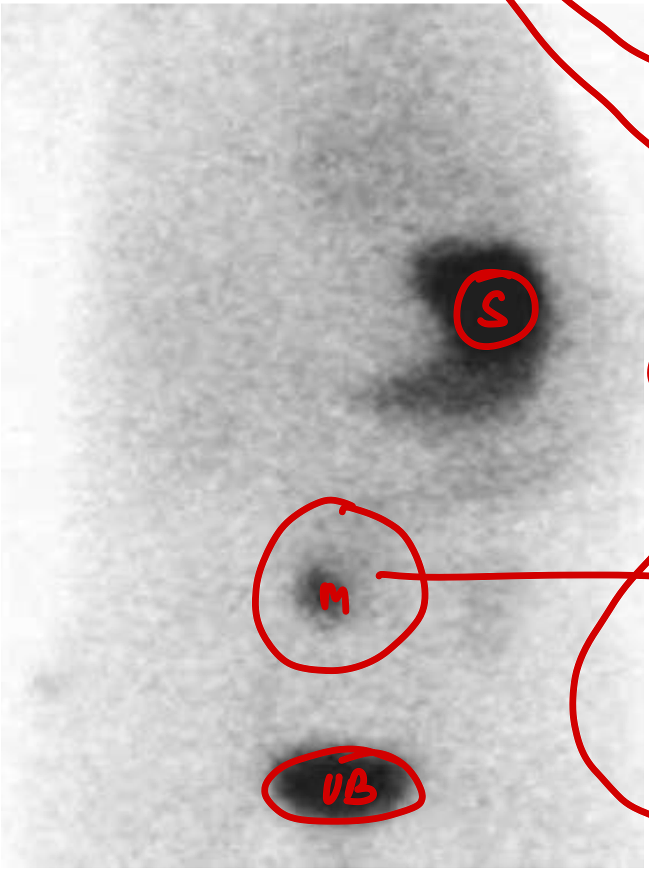
Skin crease

Telegram: @brainandscalpel
t.me/brainandscalpel

CASE SCENARIO-25

Rule of 2
- 2%
- 2 ft away from ic jn
- 2 inches size
- 2 mucosa
  - pane
  - gastric

8 year old child with RIF pain and vomiting with mild fever

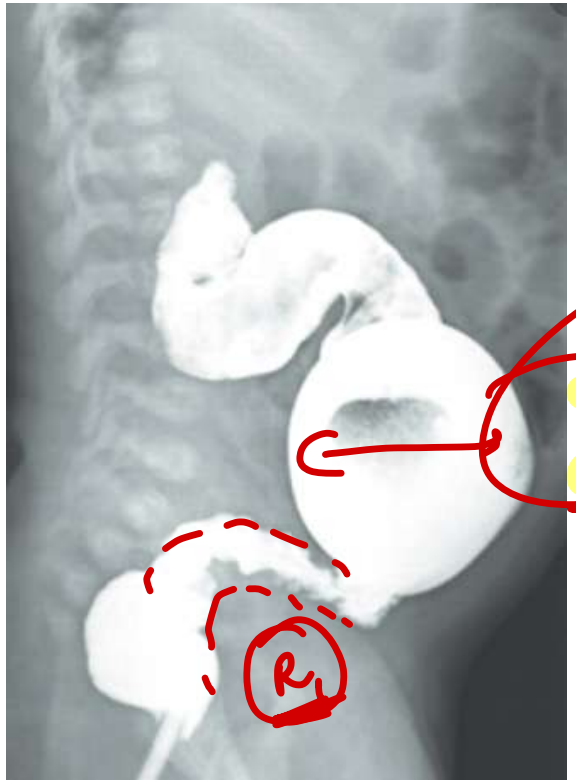


Tc 99m pertechnate

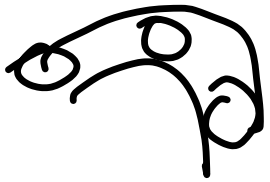
Meckel's diverticulum

CASE SCENARIO-26

3 day old baby presents with abdominal distension and failure to pass the meconium



HD



Sigmoid megacolon

Initial : Ba enema

Gold std : Rectal by → ↓ plexus

NC cells (x)

AchE (xx)

Diagnosis: HD

Management: Pull-through

CASE-27

RTA with Loss of consciousness, GCS-7
Next Ix?
A) MRI brain with SWI
B) NCCT brain
C) NCCT C-spine
D) CT angiogram

Alcoholic-fall

SDH

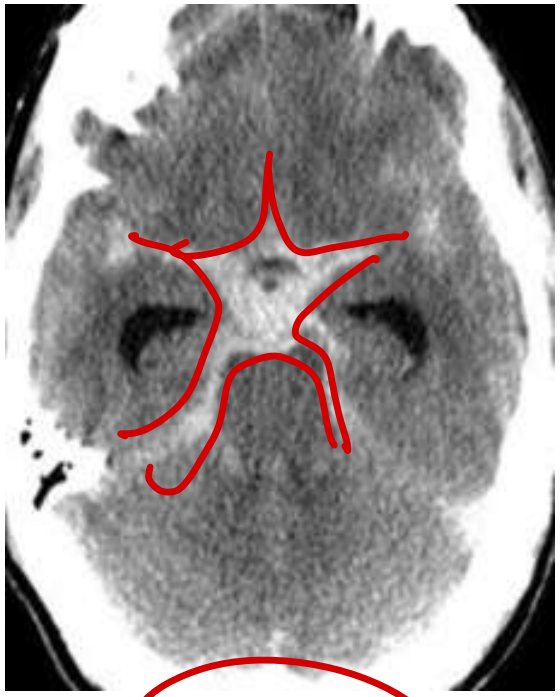
- Bridging veins
- Trivial trauma
- Sutures: ✓
- Midline ✗

H/o RTA

EDH

- Artery — MCC : MMA ant ÷
- RTA
- Sutures: ✗
- Midline ✓

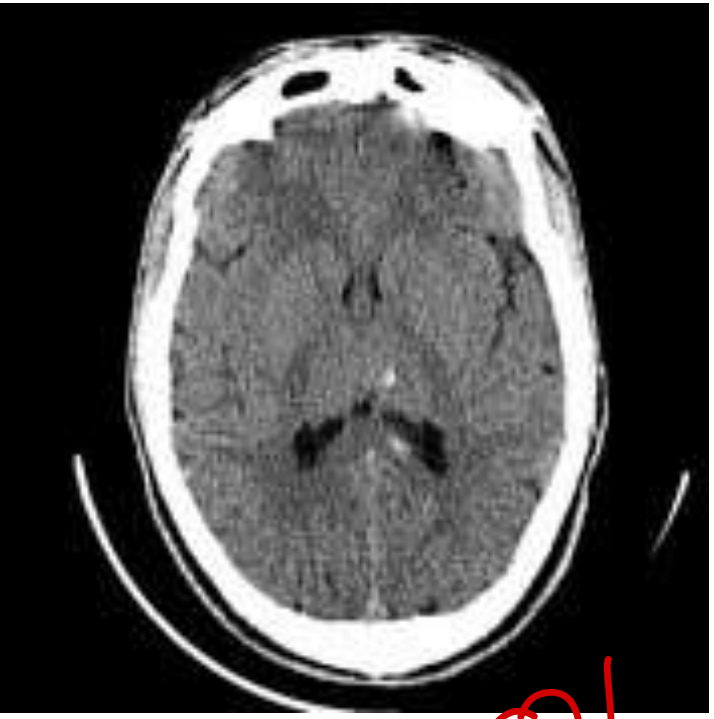
H/o RTA



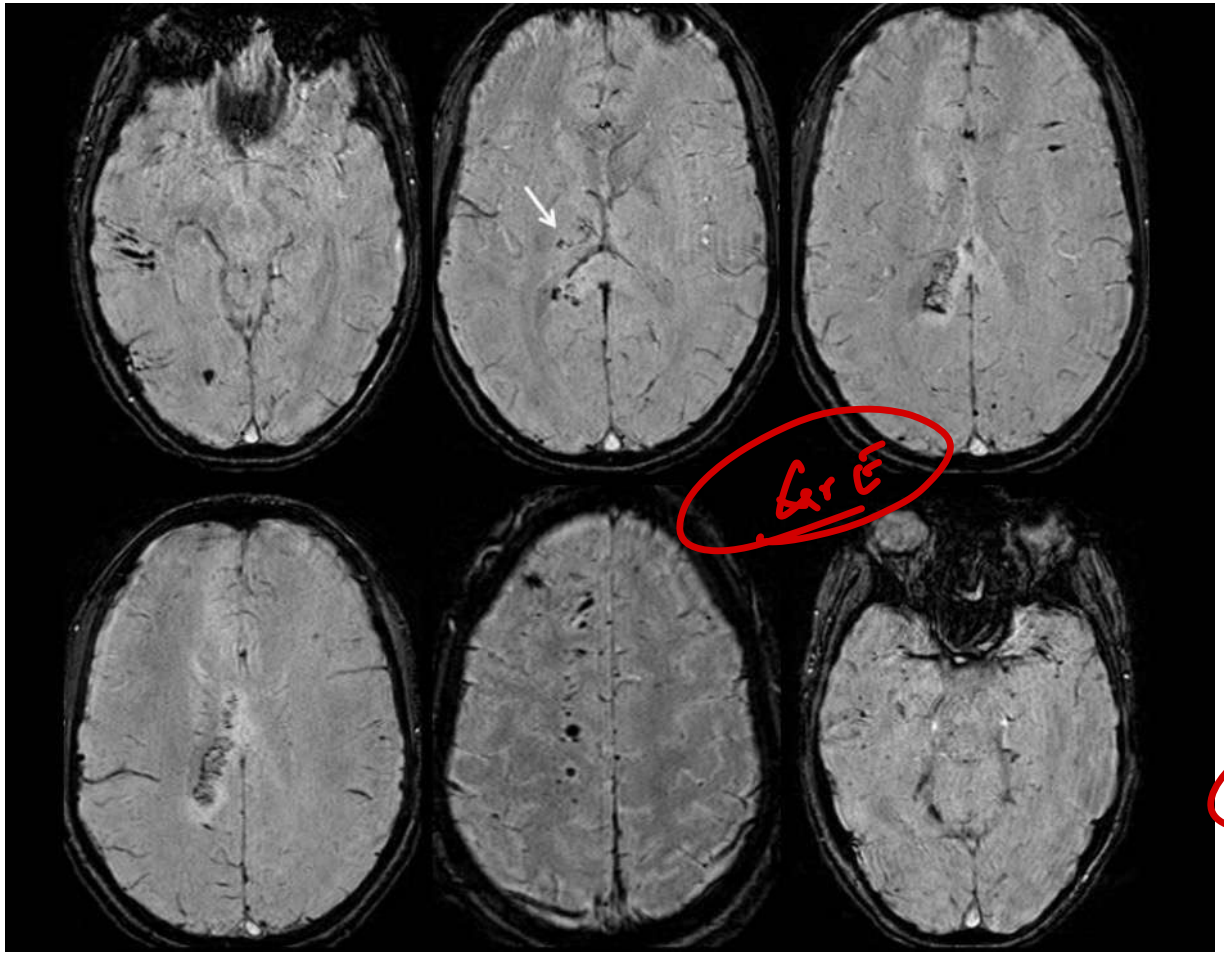
SAH

- Trauma> Aneurysm
- MC site:

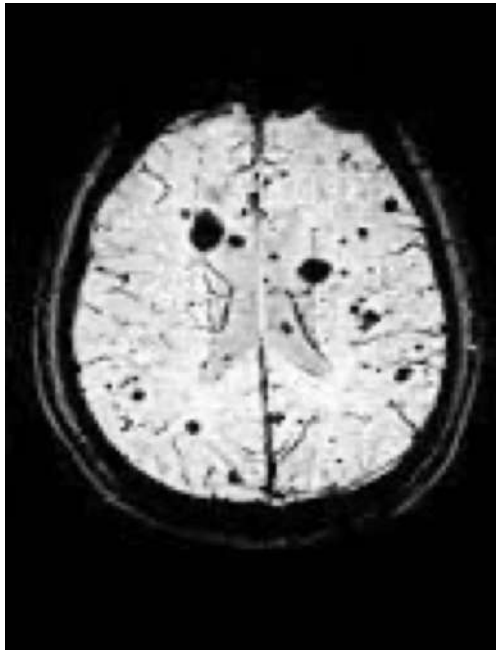
ACA - ACOM Jn



NCCT (N) / petechial hges

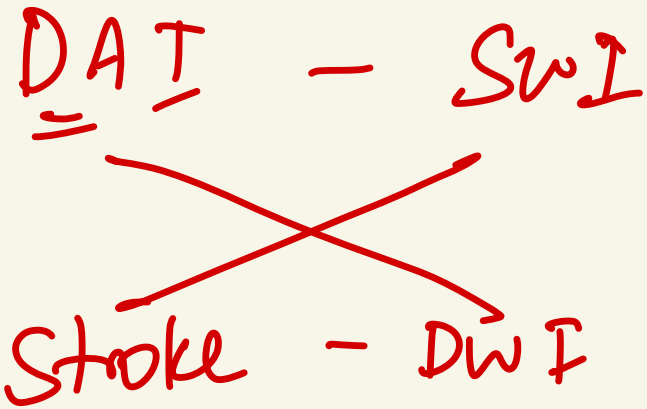


DAI



SWI

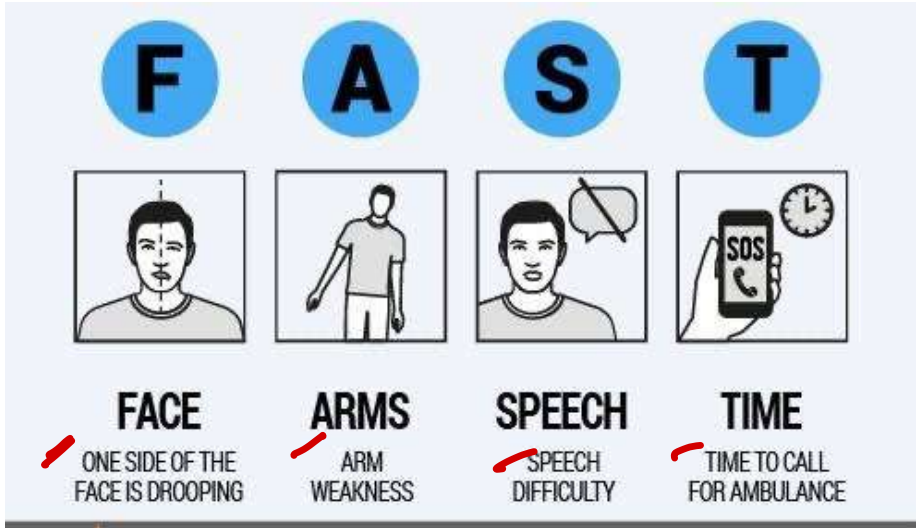
IOC - MRI



CASE-28

Focal neurological deficit
Last seen well 3 hours back
BP 150/90mm, Pulse 80 bpm

Next step:
a) IV labetalol
b) NCCT head
c) IV thrombolysis
d) CT angiography

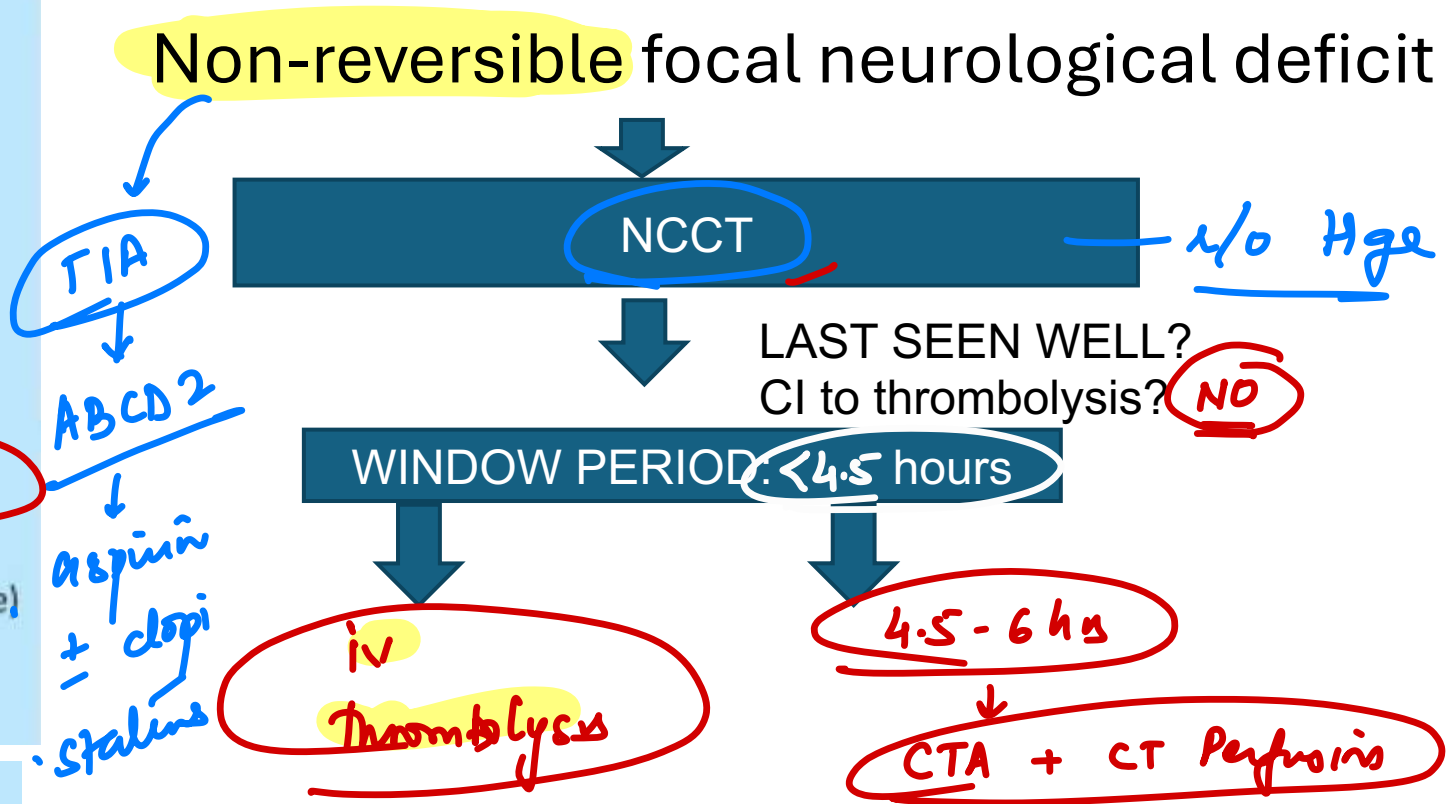


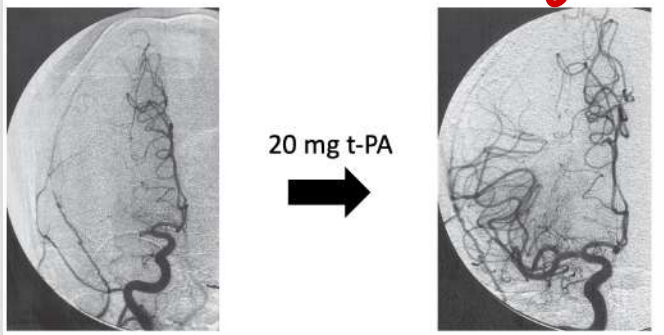
Absolute contraindications for IV rtPA:

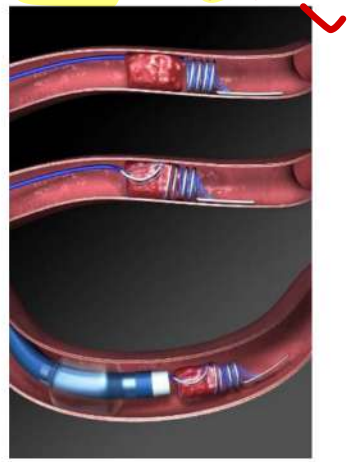
- arterial blood pressure more than 185 systolic or 110 diastolic despite treatment
- high risk of bleeding
  - INR>1.6
  - PT>15
  - platelet count<100,000
  - hereditary or acquired bleeding disorders
  - use of therapeutic doses of IV or oral anticoagulants within the last 48 hours
- extensive hypodensity on initial brain CT
- evidence of intracranial haemorrhage on initial brain CT
- recent extensive trauma (including surgery, arterial or lumbar puncture)
- high risk of intracranial pathology, eg glioblastoma

Relative contraindications for IV rtPA:

- NIHSS>25
- blood sugar<2 mmol/L or >18 mmol/L with persistence of symptoms on treatment
- recent minor trauma or surgery
- low risk intracranial structural lesions, eg meningioma, small asymptomatic aneurysm
- seizure at onset
- previous intracranial haemorrhage
- pregnancy or postpartum
- recent myocardial infarction





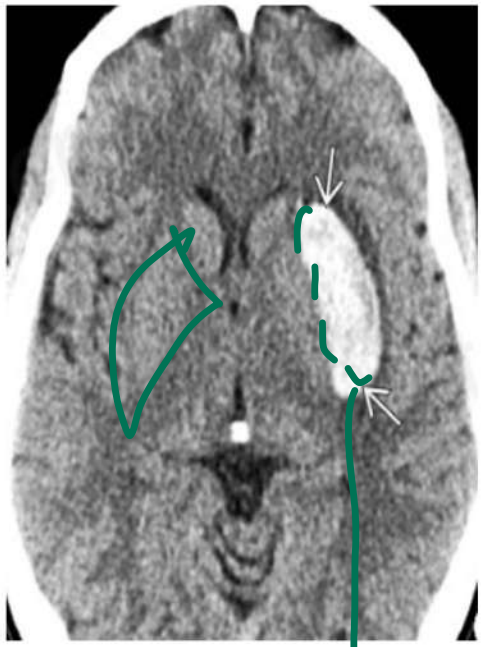


IC hemorrhage

LOBAR

- CAA
- AVM

Cocaine



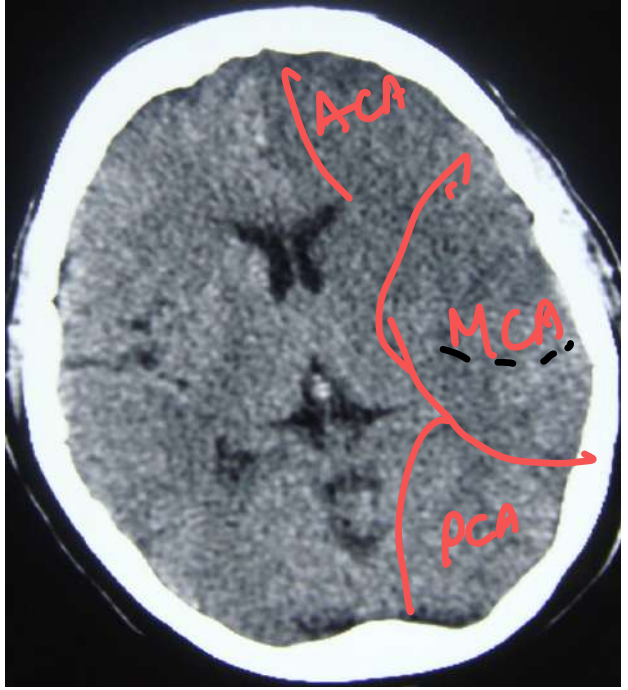
IC hemorrhage

BG – MC:

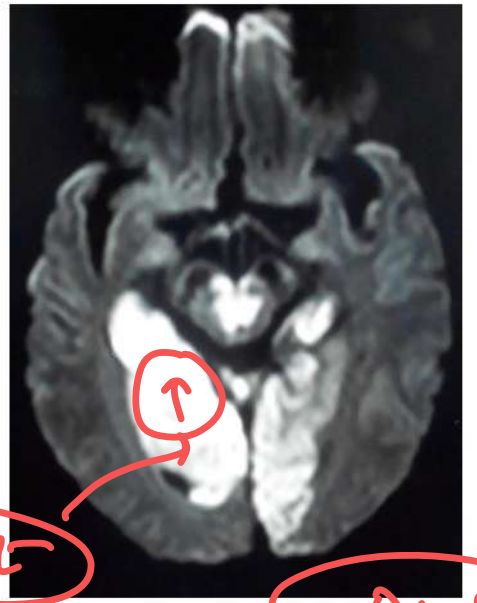
Putamen

QQ

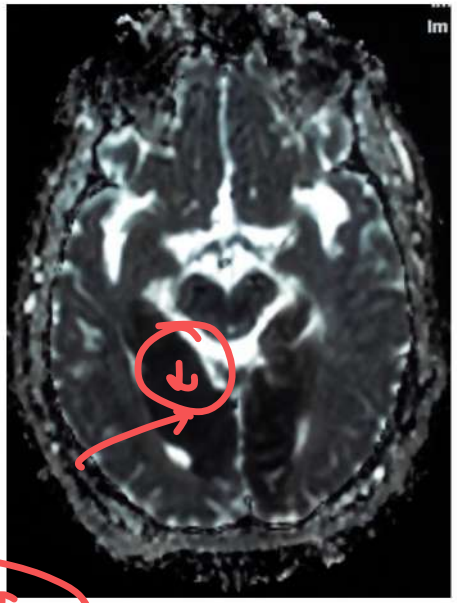
Hyli



Lacunar strok.



Infarct



Dif I

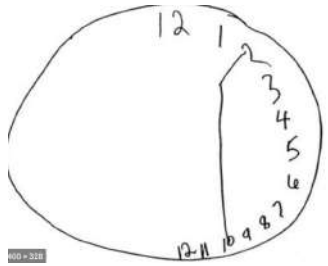
LOCALISATION

Contralateral paralysis and sensory loss: lower limb + Urinary incontinence + Personality changes- Abulia/Gait apraxia

Contralateral paralysis and sensory loss—face and upper limb + Broca Aphasia

Contralateral paralysis and sensory loss—face and upper limb+ Wernicke Aphasia + right superior quadrant visual field defect

Contralateral paralysis and sensory loss—face and upper limb + Constructional apraxia + Anosognosia



Agraphia + Acalculia + R-L disorientation+ Finger agnosia

C/l hemianopia with macular sparing + Denial of blindness + Alexia without agraphia (Dominant)

I/L monocular vision loss/Amaurosis fugax

Contralateral hemisensory loss followed by an agonizing, burning pain in the affected areas

C/L violent flinging movement

CASE-29

Severe throbbing headache, Neck pain, Vomiting

Next Ix:

a) LP

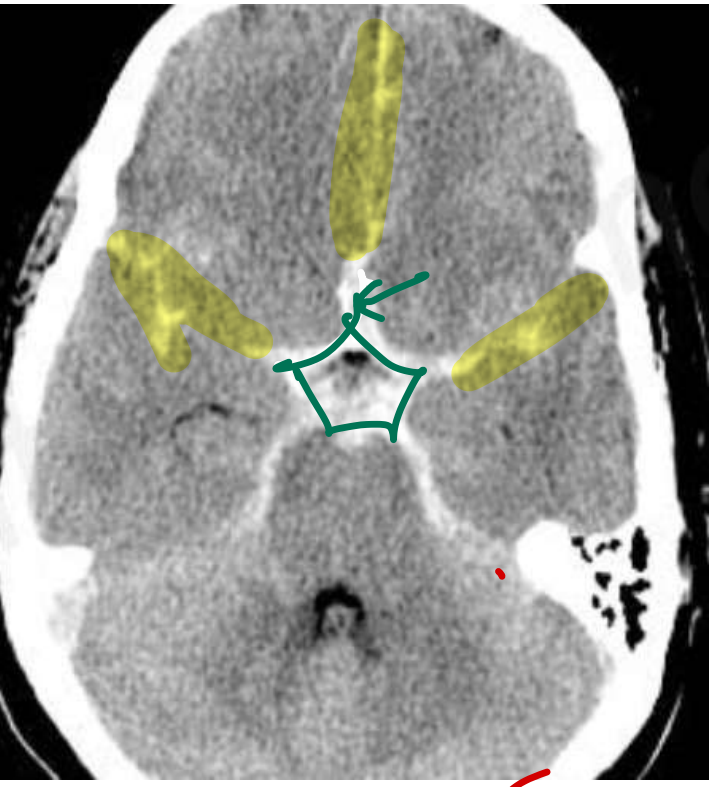
b) MRI brain

c) CT angiogram

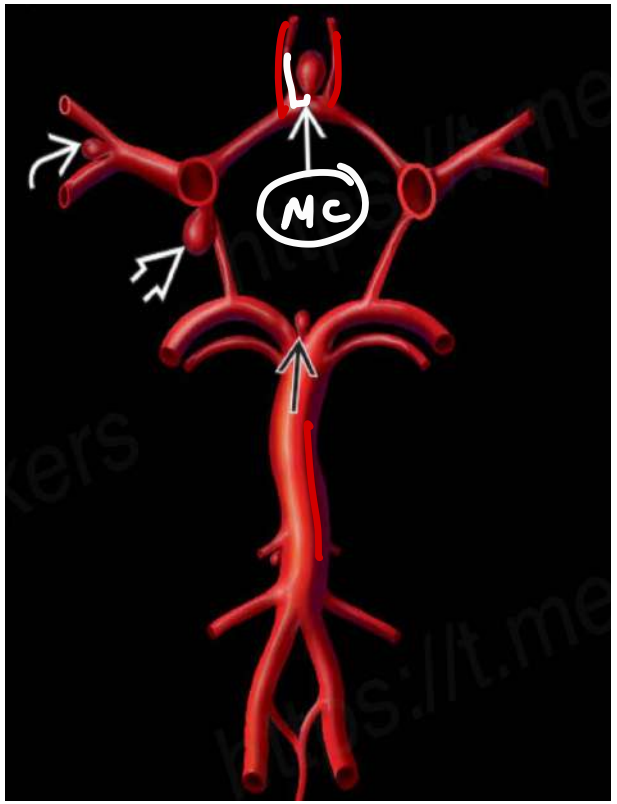
d) NCCT head

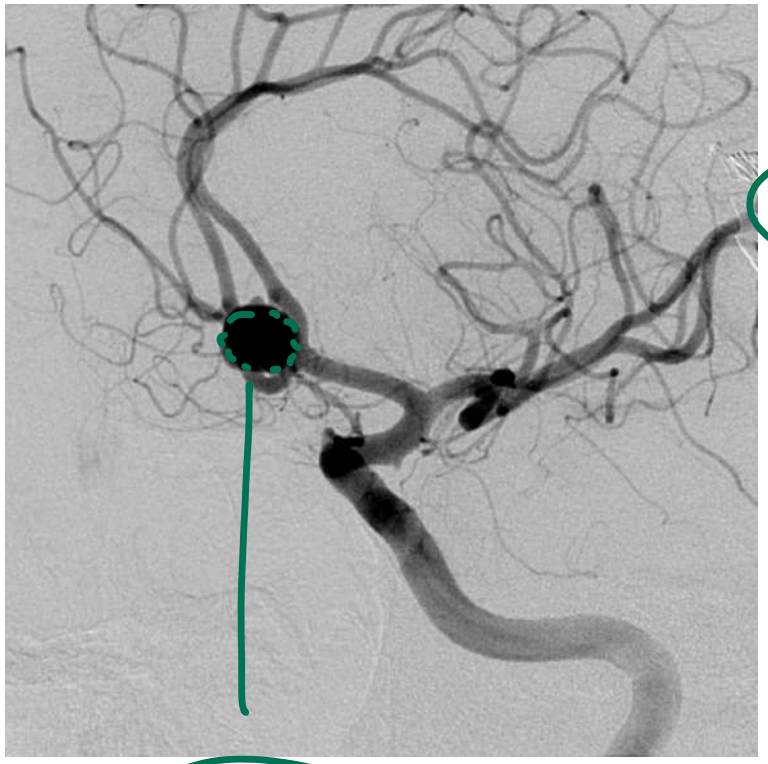
SAH

IOC : CTA



NCCT





Rx: COILING

DSA Gold std

Location of SAH

-Interhemispheric fissure: ACA - Acom
-Sylvian fissure: MCA
-Suprasellar cistern: COW circle of willis
-Prepontine cistern, 4th ventricle: Basilar A

SAH: → Hydrocephalus

Vasospasm → NIMODIPINE

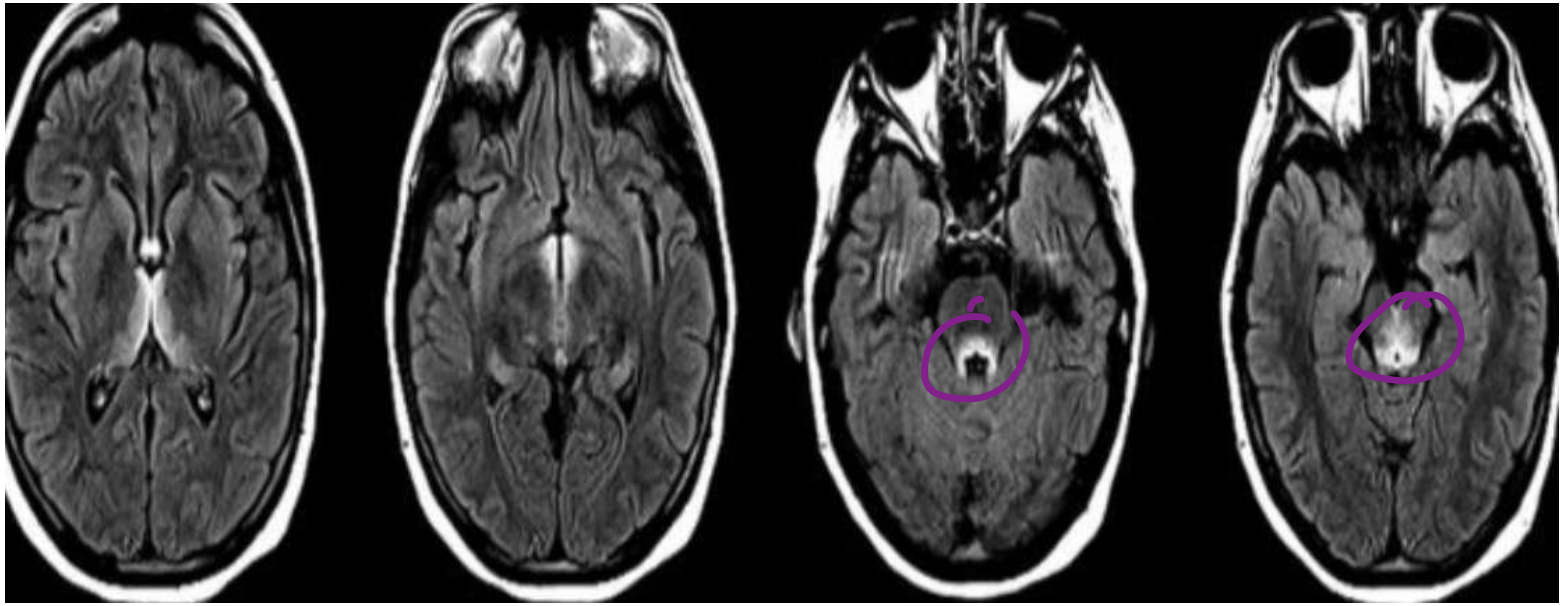
'3H' Rx

- Hypervolemia/ Hemodilution/ Hypertension

CASE-30

Q. 35 year old alcoholic patient with acute altered sensorium and confusion. He received iv fluids in the emergency. MRI is shown. Likely diagnosis?

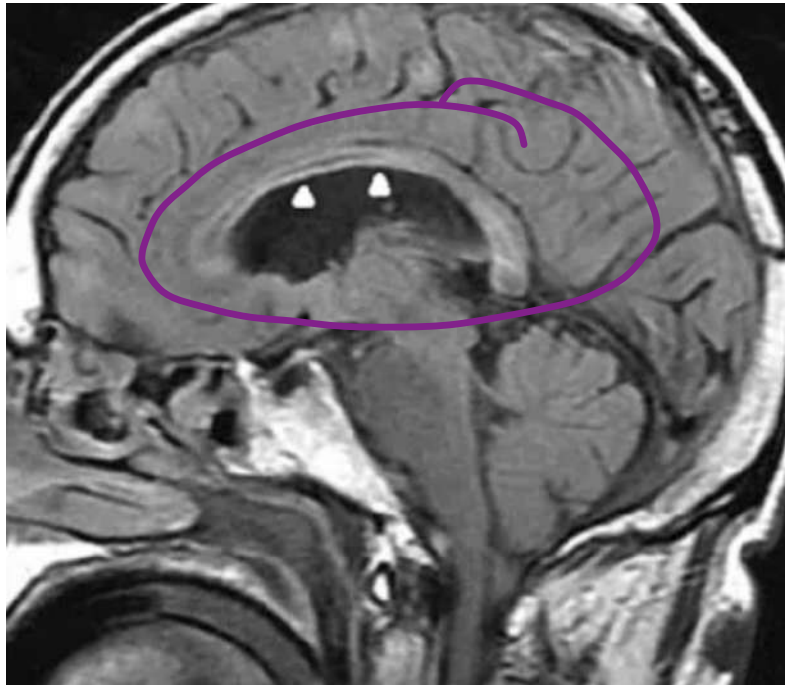
THIAMINE



A) Marchiafava-Bignami disease
B) Wernicke encephalopathy
C) Alcoholic hallucinosis
D) Osmotic demyelination

GOA

ODS
rapid overcorrect
↓Na⁺



CC:
alcoholics

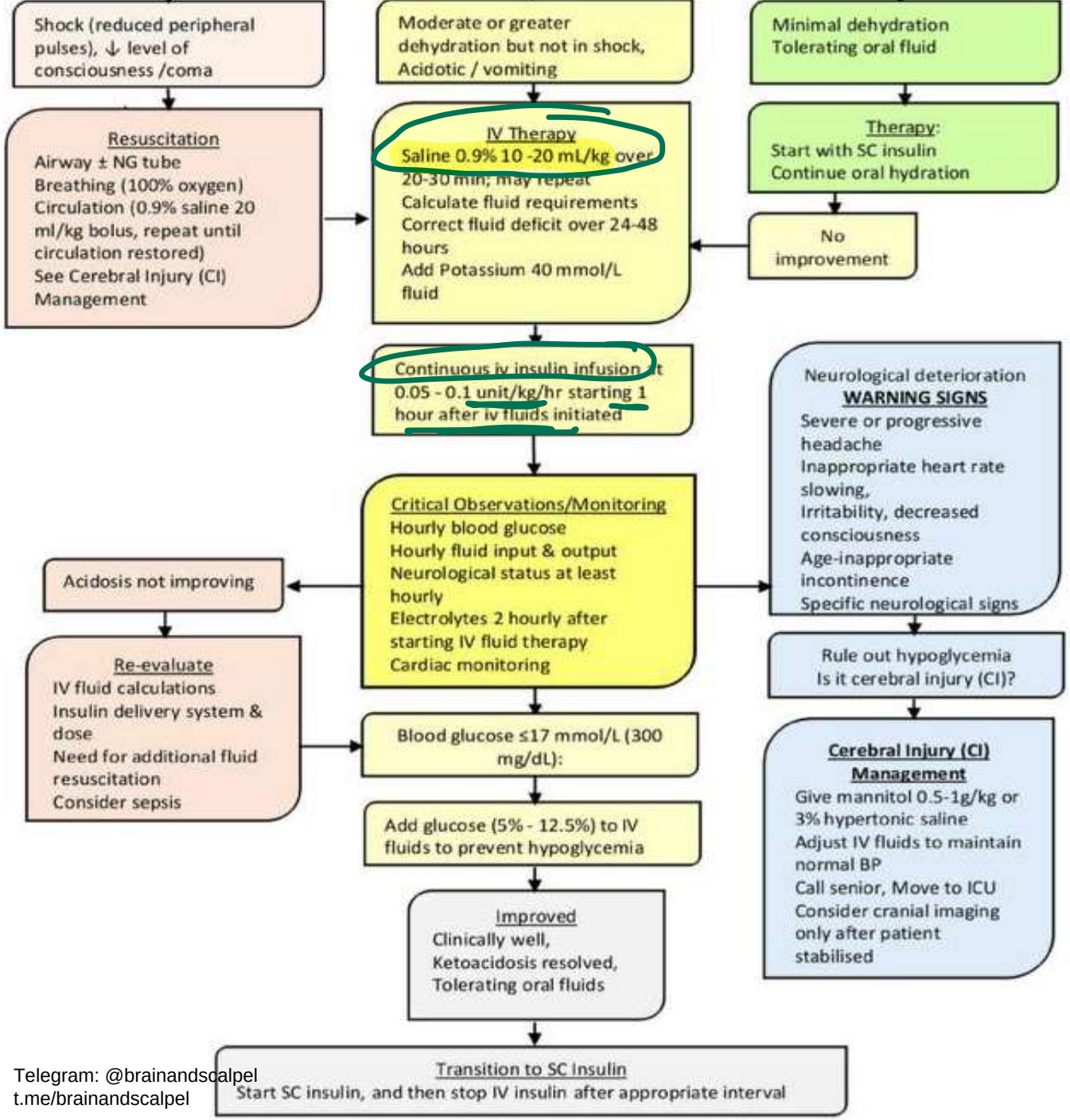
Marchiafava Bignami

Case-31

A 8-year-old child weighing 26 kg presents with a history of loose stools for 2 days. On examination, there is severe dehydration. Laboratory investigations are as follows. What is the initial management as per ISPAD guidelines?

RBS → 550
pH → 7.01
Na+ → 158
Urine glucose → 3+
Urine Ketone → +ve

A. Manage ABC, NS 40 mL/kg and start insulin SC injection
B. Manage ABC, NS 40 mL/kg along with insulin bolus 0.1 IU/kg/hr
C. Manage ABC, NS 10 mL/kg along with insulin iv infusion 0.1 IU/kg/hr
D. Manage ABC, NS 10 mL/kg and start insulin iv infusion after 1 hour



Clinical History
Polyuria, polydipsia
Nausea, vomiting
Rapid breathing or shortness of breath, abdominal pain
Weakness, weight loss
Confusion, ↓ level of consciousness

Clinical Signs
Dehydration
Deep sighing respiration (Kussmaul)
Smell of ketones
Drowsiness

Biochemical
Blood/urine ketones elevated
Hyperglycemia
Acidemia (pH <7.3, HCO3 <18 mmol/L)
Electrolytes, urea
Other investigations as indicated

ISPAD

Potassium	• Add IV potassium if serum K* ≤5.2 mEq/L • Hold insulin for serum K* <3.3 mEq/L
Bicarbonate	• Consider for patients with pH <6.9

CASE-32

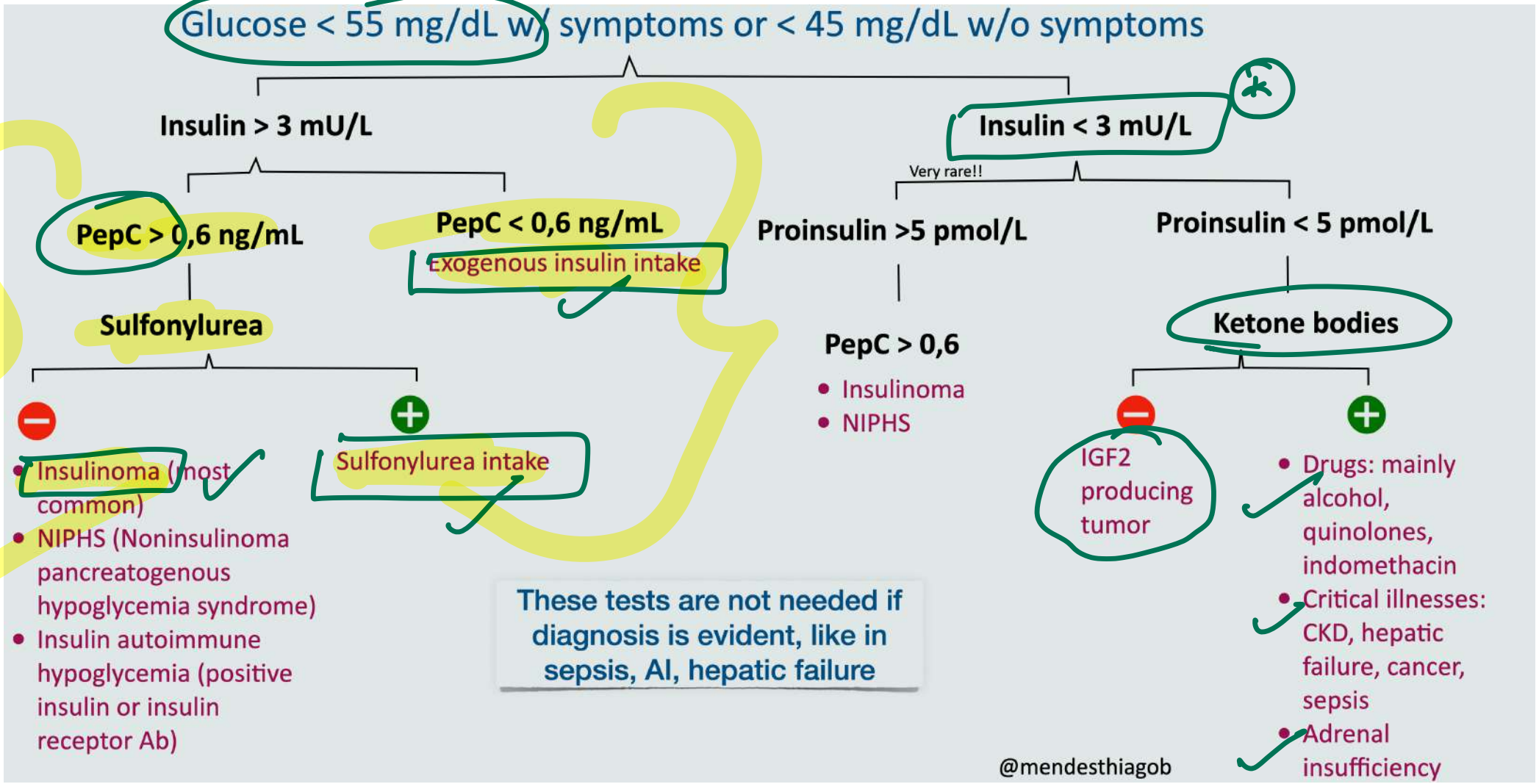
64-year-old woman is brought to the emergency department due to confusion and lethargy. The patient was asymptomatic when her husband left for work in the morning, but when he arrived home, he found her in bed weak and disoriented. The patient's medical conditions include type 2 diabetes mellitus and hypertension, for which she takes multiple medications. Laboratory testing shows an elevated serum C-peptide level. If her current condition is due to an antidiabetic drug, which of the following is the most likely culprit agent?

A. Acarbose
B. Canagliflozin
C. Glyburide
D. Long-acting insulin

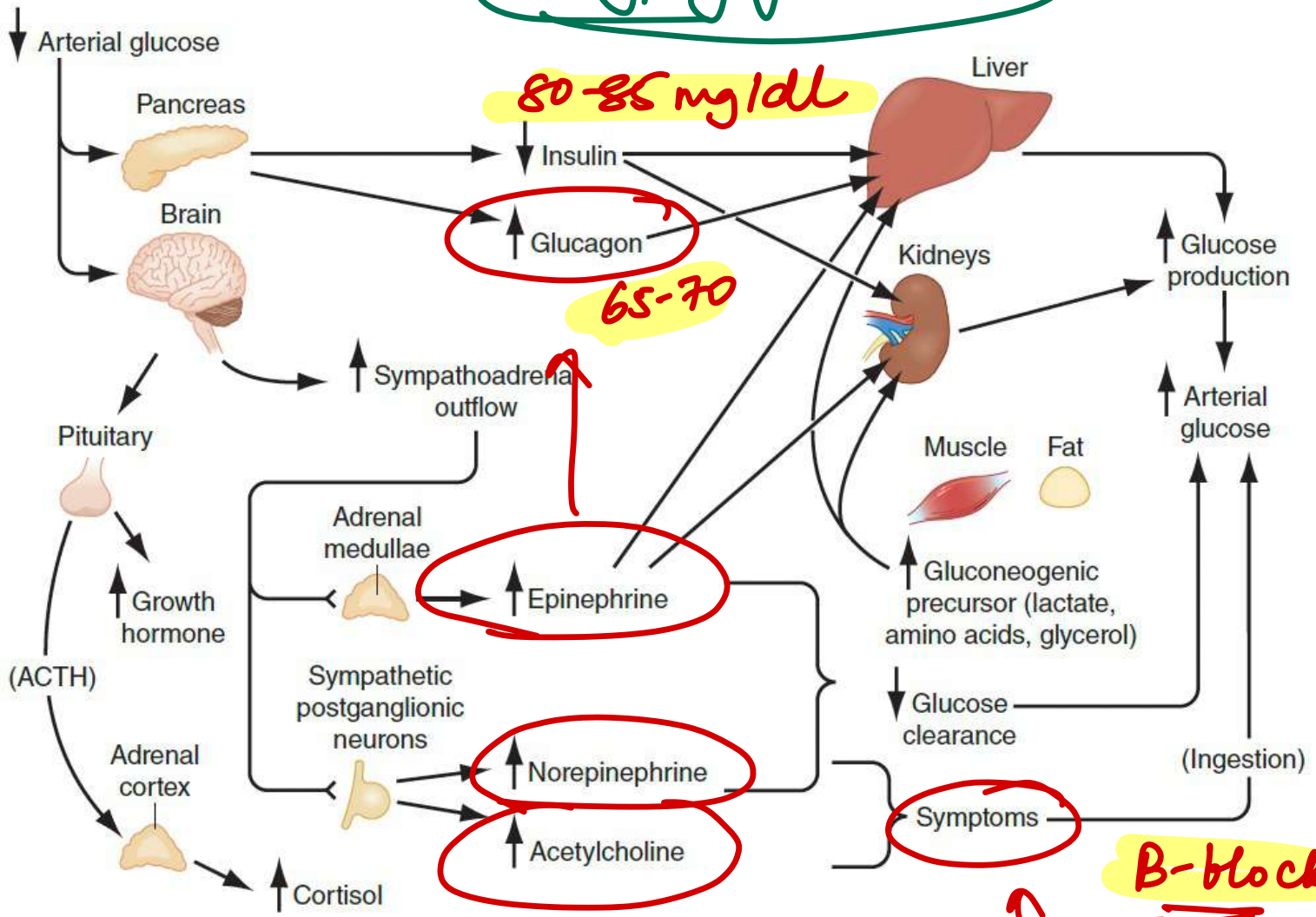
-ide
SU

= Insulinoma
= Secretagogues
~~Exog insulin~~ ↑

HYPOGLYCEMIA



Hypoglycemia



80-85 mg/dl

65-70

Symp:

<55 mg/dl

Cogn decline:

<50 mg/dl

B-blockers

except sweating

NEONATAL HYPOGLYCEMIA

Screening and Management of Postnatal Glucose Homeostasis in Late Preterm and Term SGA, IDM/LGA Infants

[(LPT) Infants 34 – 36$^{6/7}$ weeks and SGA (screen 0-24 hrs); IDM and LGA ≥34 weeks (screen 0-12 hrs)]

Symptomatic and <40 mg/dL → IV glucose

ASYMPTOMATIC

Birth to 4 hours of age	4 to 24 hours of age
INITIAL FEED WITHIN 1 hour Screen glucose 30 minutes after 1st feed	Continue feeds q 2-3 hours Screen glucose prior to each feed
Initial screen <25 mg/dL	Screen <35 mg/dL
Feed and check in 1 hour	Feed and check in 1 hour
<25 mg/dL → IV glucose*	25–40 mg/dL → Refeed/IV glucose* as needed
<35 mg/dL → IV glucose*	35 – 45 mg/dL → Refeed/IV glucose* as needed

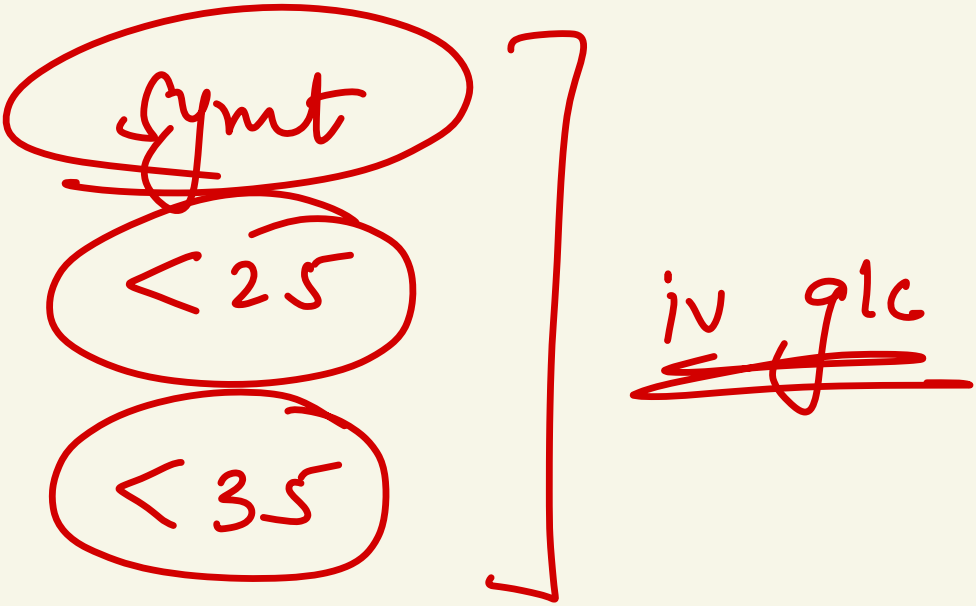
Target glucose screen ≥45 mg/dL prior to routine feeds

* Glucose dose = 200 mg/kg (dextrose 10% at 2 mL/kg) and/or IV infusion at 5–8 mg/kg per min (80–100 mL/kg per d). Achieve plasma glucose level of 40-50 mg/dL.

Symptoms of hypoglycemia include: Irritability, tremors, jitteriness, exaggerated Moro reflex, high-pitched cry, seizures, lethargy, floppiness, cyanosis, apnea, poor feeding.

BLOOD glc < 45 mg/dl

feeding



CASE-33

A 40-year-old female presents to the emergency department with symptoms of fever, tachycardia, and altered mental status. She has a history of untreated hyperthyroidism. Physical examination heart rate of 160 bpm, and signs of delirium. Laboratory tests show elevated free T4 and T3 levels. What is not an appropriate next step in the management of this patient?

A) Initiate high-dose glucocorticoid therapy
B) Slow rewarming
C) Start intravenous beta-blocker therapy
D) Initiate thionamide antithyroid medication therapy

Thyroid emergencies

THYROID STORM

Raised fT3, T4+
CNS-Restlessness, delirium+
Fever/ Tachycardia / CHF

- **Beta blockers:** decreases adrenergic hyperactivity (sympathetic outflow)
- **PTU (large amounts):** prevents synthesis of the hormone
- **Glucocorticoids:** inhibit hormone production and decrease peripheral conversion from T4 to T3.
- **Sodium iodide solution (Lugol's solution):** High levels of iodide will initially suppress release of thyroid hormone
- **Treat cardiac symptoms, fever and hypertension**

Myxedema

Altered mental status
TSH> 15 MU/L
Hypothermia/Bradycardia
PPT: Sepsis/ Sedatives

HYPOTHYROID COMA

etiologic therapy
i.v. LIOTHYRONINE and/or L-THYROXINE

support therapy
i.v. HYDROCORTISONE

treatment of electrolyte imbalance
1. Water restriction
2. 0.9% NaCl solutions if Na+ <120 mEq/l

selected cases
1. Assisted mechanic ventilation in patients with *respiratory acidosis*
2. i.v. furosemide if *pulmonary edema* occur
3. Treat *hypothermia* (temperature <35 C)

BE AWARE OF:
Concurrent hypoadrenalism (Schmidt's syndrome)
- Concurrent panhypopituitarism

CASE-34

A 24-year-old man met with an RTA and was brought to the casualty after 6 hours. His B.P. was 90/60 mm Hg, heart rate was 110/min, and Sp02 was 92%. A blood transfusion was done. After a few hours, the patient is febrile, tachypneic, and starts bleeding from the IV and NG tube sites. His SpO2 levels started falling. What could be the cause?

A. Acute hemolytic Transfusion reaction
B. Non hemolytic Transfusion reaction
C. TRALI
D. TACO

Complication	Signs/Symptoms	Treatment
AF NHTR	Fever, Chills, Malaise Mc	Supportive-acetaminophen
HTR	Fever, chills, pain at the site of reaction, nausea/vomiting, shock, dark urine	STOP the transfusion IV fluids +/- diuretics ABO mismatch
Allergic	Urticaria, pruritis, hives	Symptomatic-antihistamines.
TRALI	Dyspnea, hypoxemia, bilateral chest infiltrates HLA	STOP the transfusion airway control, supportive care
TACO	Dyspnea, edema, JVP Raised	Slow infusion + Diuretics