Blood Test #1

WAMSS SGR 2022

Trigger

You are an intern working in ED. Bethanie, a 45F with a BMI of 34 presents with a 3 day history of constant RUQ pain which is worse postprandially, radiates to her right shoulder and is associated with vomiting. Beth describes her urine as tea coloured and her stool as clay coloured. She has sleeve tattoos, a history of IVDU and poorly managed T2DM.

On examination she has scleral jaundice and scratch marks on both of her arms. All vital signs are within normal limits.

Bloods were performed on admission to further investigate.

Task: Interpret the results, provide a working diagnosis and list other investigations/things you would like to do.

FBC

- Haemoglobin 140 (135-180)
- White cell count 5 (4-11)
- Platelets 160 (150-400)
- MCV 95 (80-100)

U&Es

- Cr 102 (60-110)
- eGFR 69 (>60)

LFTs

- ALT 39 (<40)
- AST 21 (<30)
- ALP 338 (30-110)
- GGT 193 (<60)
- Bilirubin 52 (<20)
- Albumin 38 (35-50)

Results	FBC – no abnormal findings, no elevated WCC which would indicate infection U&Es – no abnormal findings LFTs – elevated bilirubin (expected from the scleral jaundice) and elevated ALP and GGT. ALT and AST are within normal limits. This is a cholestatic picture.
Working diagnosis	My working diagnosis is choledocholithiasis (gallstone in the common bile duct). The patient presents with classic RUQ pain, obstructive jaundice and no signs of infection (serum or clinical). Obesity, diabetes and increasing age are risk factors for gallstones. Despite some risk factors for liver disease, the patient's ALT is within normal limits. The signs indicating the stone is potentially located in the common bile duct: • Jaundice • Pale stool • Dark Urine • Pruritus The pain in choledocholithiasis is classically constant, fluctuating, postprandial RUQ pain that radiates to the right shoulder or back.
Further investigations and workup	Keep Beth nil by mouth (postprandial pain + pre-op) IV analgesia as required Consider IV antibiotics if infection concern IV fluids as required Confirm diagnosis with ultrasound Refer to gastroenterology/general surgery based on stone location Pre-op: nil by mouth, CXR/ECG, group and hold, bloods (coags), anaesthetic review ERCP: pass/destroy gallstone e.g. sphincterotomy stent, lithotripsy Prophylactic laparoscopic cholecystectomy if cholelithiasis is identified and patient is surgically fit

The 6 F's of Gallstones

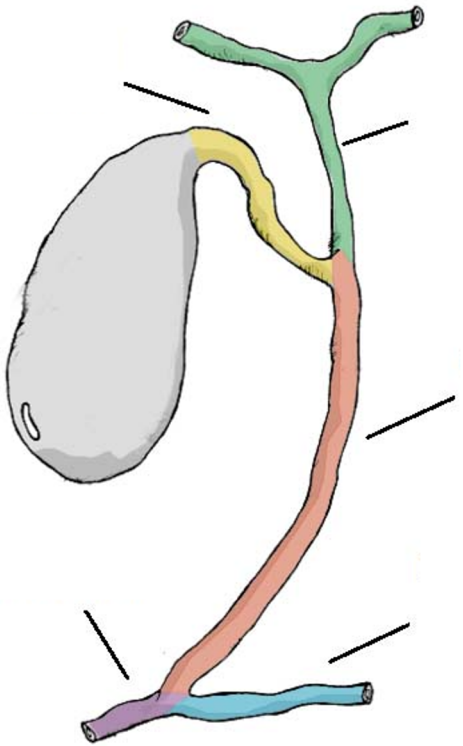
- **F**emale
- **F**orty
- **F**air skin
- **F**amily history
- **F**at (overweight)
- **F**ertile

$f \; f$

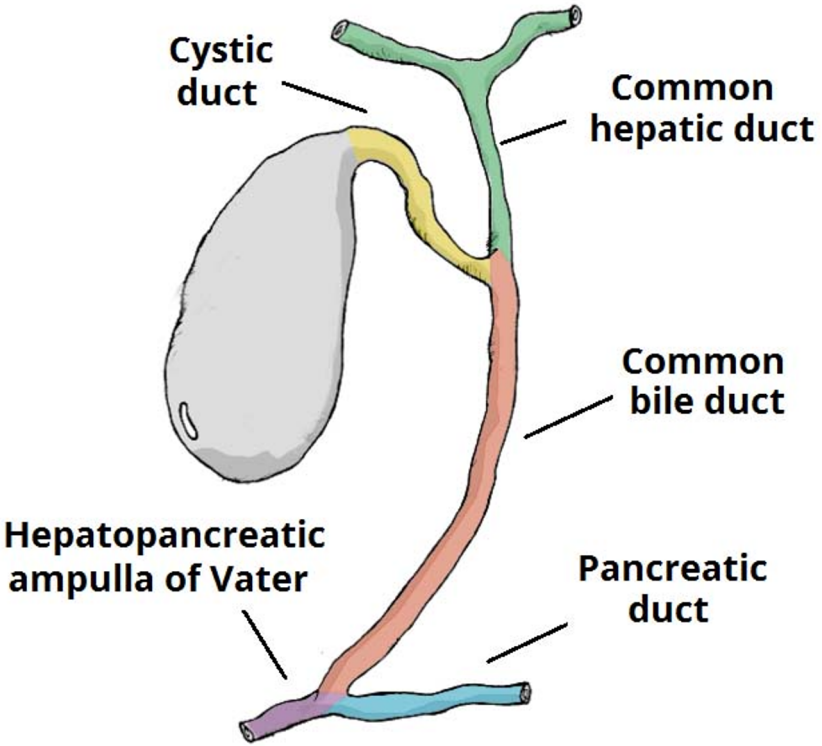
Follow-up Questions

WAMSS SGR 2022

1. Label the following diagram of the biliary tree.



Question 1



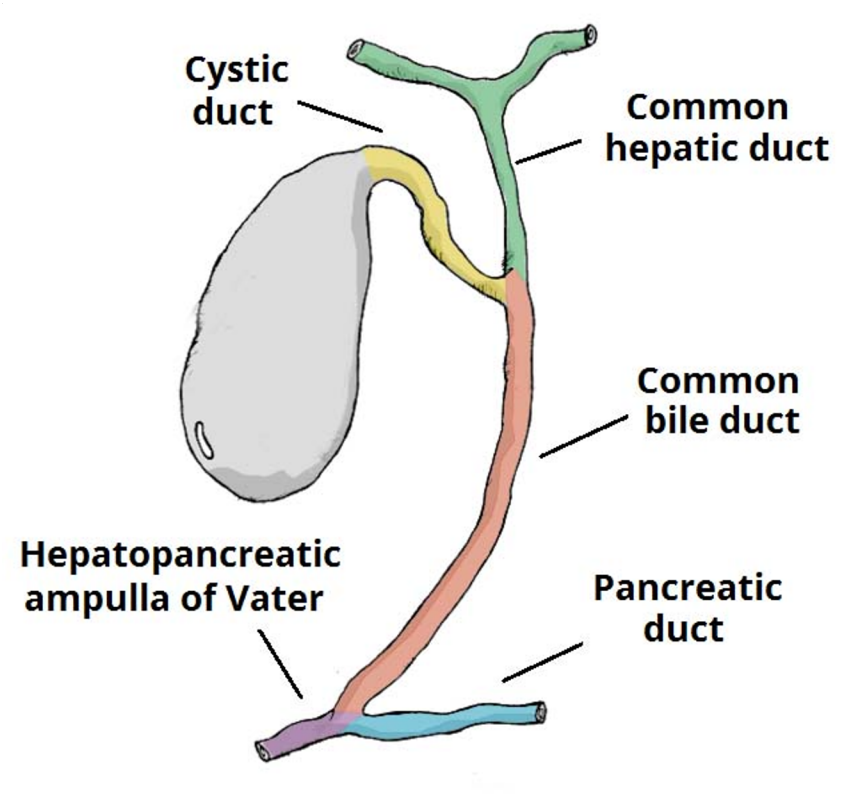
https://teachmeanatomy.info/abdomen/viscera/gallbladder/

1. Label the following diagram of the biliary tree.

2. What conditions resulting from gallstones can occur in each part of the biliary tree?

Question 2

- Gallbladder/cystic duct
  - Biliary colic
  - Acute/chronic cholecystitis
  - Mirizzi syndrome
  - Gallbladder carcinoma/cholangiocarcinoma
- Common bile duct
  - Choledocholithiasis
  - Cholangitis
  - Pancreatitis
- Ampulla of Vater/pancreatic duct
  - Pancreatitis



1. Label the following diagram of the biliary tree.

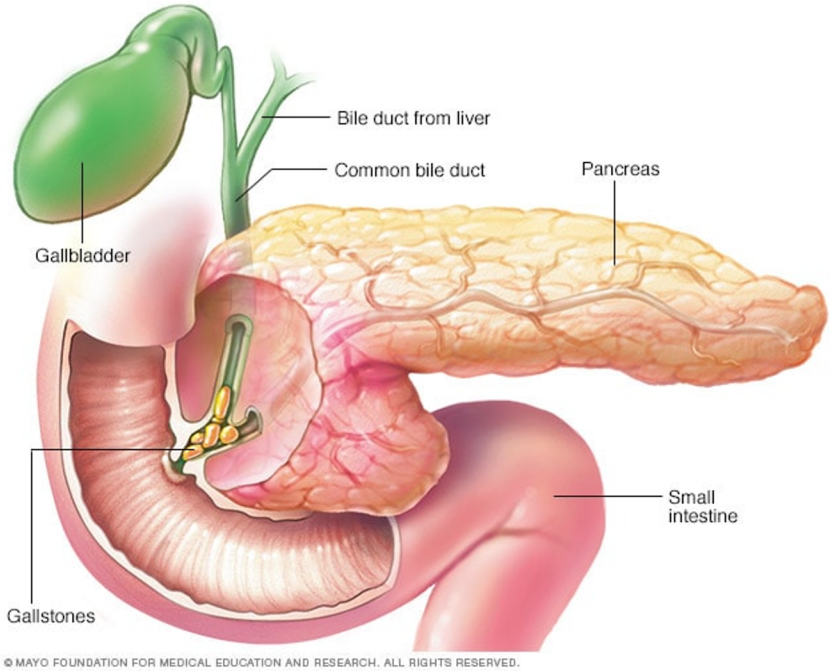
2. What conditions resulting from gallstones can occur in each part of the biliary tree?

3. List 5 aetiologies of pancreatitis.

4. How is a diagnosis of acute pancreatitis made?

Question 3

- Acronym: I GET SMASHED
  - **I**diopathic (3rd most common cause)
  - **G**allstones (most common cause)
  - **E**thanol (2nd most common cause)
  - **T**rauma
  - **S**teroids
  - **M**umps virus
  - **A**utoimmune disease
  - **S**corpion sting
  - **H**ypertriglyceridaemia/**H**ypercalcaemia/**H**ypothermia
  - **E**ndoscopic retrograde cholangiopancreatography (ERCP)
  - **D**rugs e.g. oestrogen, loop/thiazide diuretics, azathioprine



Question 4

- Revised Atlanta classification
- ≥2 of the following criteria

1. Abdominal pain suggestive of pancreatitis
    - Epigastric, radiating to the back, relieved by leaning forwards, worse postprandially
2. Serum lipase or amylase > 3 times the upper limit of normal
3. Characteristic imaging findings

- Note: imaging is not necessary to make a diagnosis!

Thank you!

E sgr@wamss.org.au
A M501 University of Western Australia, 35 Stirling Hwy, Crawley, WA 6009
W wamss.org.au | **FB** WAMSSUWA | **IG** @wamssuwa