Abdominal Examination

- Intro (WIIPPPPE)
  - Wash your hands
  - Introduce yourself
  - Identity of patient – confirm
  - Permission (consent and explain examination)
  - Pain?
  - Position
    - Initially at 45° but must be lying flat to palpate abdomen. A pillow under the head or raising knees slightly might help this.
  - Privacy
  - Expose fully (nipples to knees). Important to see hernial orifices.

- General Inspection
  - Surroundings
    - Monitoring:
      - Catheter +/- urometer (inspect for quantity and colour)
      - Pulse oximeter
      - Surgical drains
    - Treatments
      - Oxygen specs/mask (method of delivery, rate, SATs)
      - NG tube, IV fluids/ antibiotics
      - TPN lines
      - Central lines
      - PCA pump
      - Ensure drinks
      - Bottles of Creon
    - Paraphernalia:
      - Food and drink
      - Nil by mouth (NBM) signs
      - Vomit bowels
  - Patient
    - Well/ unwell
    - Alert/ drowsy
    - Orientated/ confused
    - Comfortable at rest/ writhing around in pain/ peritonitic
    - Cachexia (look for temporalis wasting or skin fold thickness)/ obesity
    - Tachypnoea
    - Skin colour
      - Jaundice (seen when bilirubin >40)
      - Anaemic
      - Bronze diabetes (hereditary haemochromatosis)
    - Obvious scars

- Hands
  - Inspect:
    - Clubbing (4 C’s)
      - Cirrhosis, Crohn’s disease, Coeliac disease, ulcerative Colitis
    - Koilonychia (iron deficiency)
- Leuconychia
  - Hypoalbuminaemia secondary to liver disease, nephrotic syndrome, malnutrition or protein-losing enteropathy
- Palmar erythema
  - Chronic liver disease, thyrotoxicosis, pregnancy
- Dupuytren’s contracture (idiopathic, alcoholic liver disease)
  - Palpate:
    - Capillary refill
    - Pulse
    - Check for asterixis
    - Sign of hepatic encephalopathy, or any other type of encephalopathy. Usually bilateral unless due to a neurological lesion.

- Arms
  - Bruises – coagulopathy (liver disease)
  - Excoriations - pruritus (↑bilirubin / uraemia/ anaemia)
  - Tattoos
  - Needle track marks
  - Cannulae
  - PIC lines
  - AV fistula scars
    - In use? Look for needle marks.
    - Patent? Feel for a thrill, auscultate for bruit.
    - Kidney transplant? Pay attention when palpating abdomen!

- Eyes
  - Scleral icterus
  - Conjunctival pallor (anaemia)
  - Kayser-Fleischer rings
    - Sign of Wilson’s disease - these can only be seen with a slit lamp.

- Mouth
  - Angular stomatitis (B12 or iron deficiency)
  - Macroglossia (B12 or folate deficiency)
  - Dry mucous membranes
  - Oral candidiasis (immunosuppression)
  - Gingival hypertrophy (immunosuppression)
  - Aphthous mouth ulcers (IBD, coeliac)
  - Patient’s breath
    - Alcohol
    - Pear drops in DKA
    - Fetor hepaticus in liver failure)

- Neck
  - JVP
    - Raised in RHF leading to liver failure
  - Cervical lymphadenopathy
    - The GI tract begins in the mouth!
  - Virchow’s node
- Left supraclavicular fossa - if palpable this is Troisier’s sign.

- Chest
  - Central lines
  - Scars
  - Gynaecomastia (chronic liver disease)
  - Spider naevi in SVC distribution
    - >5 is pathological and suggests chronic liver disease

- Abdomen
  - **Position**
    - Ensure the patient is lying flat at this point
  - **Screening**
    - Ask patient to take a deep breath in (peritonism)
    - Ask the patient to lift their head off the bed looking for divarication of rectus abdominis
    - Ask the patient to turn their head and cough whilst palpating hernial orifices
  - **Inspection**
    - Distension (6Fs):
      - Fat
      - Foetus
      - Fluid
      - Flatus
      - Faeaces
      - Fulminant tumour
    - Scars
      - Take some time over this, particularly when looking for small paracentesis or biopsy scars.
    - Striae
      - Pregnancy, rapid growth during puberty, medications e.g. steroids
    - Stoma + stoma bag
      - Position
      - Flush/ spouted
      - Contents of bag
    - Caput medusae
      - = Umbilical recanalisation due to portal HTN. Flow is away from umbilicus.
    - Grey-Turner’s sign
      - = Bruising of the flanks. Signs of retroperitoneal haemorrhage e.g. due to severe pancreatitis.
    - Cullen’s sign
      - = Periumbilical bruising. Also a sign of retroperitoneal haemorrhage.
  - **Palpation**
    - Same level as patient
      - 9 areas to palpate
      - Least painful → most painful area
      - Watching the patient’s face
      - Lightly then more deeply
        - Lightly – guarding, rigidity?
        - Deeply for organomegaly
- Liver – start in RIF, towards RUQ
- Spleen – start in RIF, towards LUQ
  - Ballot kidneys (upper hands still, bottom hand moves)
    - AAA – gently (above umbilicus)
  - Percussion
    - Liver (from RIF to RUQ and from clavicle down)
    - Spleen
    - Bladder
    - Shifting dullness if distended and suspect ascites (offer if not distended)
  - Auscultate
    - Bowel sounds:
      - Tinkling = mechanical bowel obstruction
      - Absent = ileus or peritonism
    - Bruits: AAA, renal

- Legs
  - Peripheral oedema (right heart failure, pregnancy, hypoalbuminaemia secondary to liver disease or nephrotic syndrome)
  - Bruising
  - Erythema nodosum (IBD)

- Closure
  - Thank patient
  - Patient comfortable?
  - Help getting dressed?
  - Wash hands

Turn to examiner, hands behind back, holding stethoscope (try not to fidget!) before saying:

- “To complete my examination, I would like to…”
  - Fully examine
    - Hernial orifices
    - Inguinal lymph nodes
    - External genitalia
  - Perform a DRE (important, don’t forget this one!)
  - Bedside Invx:
    - Look at obs chart and repeat set of obs
    - Urine dip
    - Pregnancy test
  - If ascites is found, do a full cardiac exam – need to examine volume status.
## Questions about the abdominal examination

- **Causes of cirrhosis**
  - Alcohol
  - Viral
  - NAFLD/NASH
  - Autoimmune
    - PBC, PSC, AI
  - Genetic
    - CF, HH, Wilsons
    - Glycogen storage diseases
  - Drugs
    - Isoniazid
    - Methotrexate, amioderone, phenytoin, nitrofurantoin
  - Vascular
    - Budd-Chiari
  - Idiopathic
- **Why oedema in liver disease**
  - Low albumin
  - Stimulation of RAAS
- **Signs of ETOH**
  - Cachexia, tremor, parotid enlargement, dupytrens, cerebellar dysfunction, peripheral neuropathy and myopathy
- **Complications of cirrhosis**
  - Liver failure
    - Coagulopathy and encephalopathy
  - Portal HTN
    - Ascites
    - Varices
    - Hypersplenism
  - Jaundice
  - HCC
- **Causes of decompensation**
  - Infection
  - SBP
  - GI bleeding
  - Sedatives
  - HCC
- **Classify severity**
  - Child-Pugh (severity and prognosis)
    - Bilirubin, PT, albumin
    - Ascites, encephalopathy
  - Score 5-6 = A (90% 5-year survival)
  - Score 7-9 = B (80% 5-year survival)
  - Score 10 and up = C (33% 1 year)
- **How do you manage cirrhosis**
  - Slowing disease
    - Antiretrovirals, immunosuppression in autoimmune
  - Prevent more damage
    - Stop ETOH, vaccinate against Hep B and C, and pneumovax
  - Look for complications
    - 6-monthly USS and AFP for HCC
    - Endoscope
- Varices plus C-P grade C get beta-blocker
  - ABx following SBP
  - Liver transplant
  - 6 months abstinence, age <65