

Introduction

- Wash/Sanitize hands
- Greet patient in a warm, welcoming tone
- introduce yourself to the patient and clarify their identity and also purpose for visit
- Explain what you would like to do and obtain consent
- If female student + male patient, (or vise versa) introduce chaperone

Positioning

- Patient should be laying down (if they are comfortable that way).
- Exposed from the waist up
- If liver is enlarged or suspected cirrhosis, patient should be propped up at a 45 degree angle to assess the jugular venous pressure (in order to rule out right heart failure as a cause of liver disease

General Inspection

From foot of bed

- Are they comfortable at rest?
- Do they appear to be tachypneic?
- Are there any obvious medical appliances around the bed?
- Are there any medications around the bed
- Any wasting? (malabsorption, anorexia, malignancy), obesity, jaundice, or rashes

Exposed areas of skin

- Fragile vesicles appear on exposed areas of the skin and heal with scarring in patients with porphyria cutanea tarda, a genetic disease that causes cirrhosis and is more common in those with hepatitis C.
- Tense tethering of the skin in systemic sclerosis may be associated with heart burn and dysphagia from gastro-esophageal reflux and diarrhea from gastrointestinal motility disorders.

Eyes

- Check sclerae for signs of jaundice
- Red eye from iritis may be seen in inflammatory bowel disease
- Conjunctive pallor suggests anemia, more reliable than nail beds or palmar creases

Eyes: yellow (jaundice), Red (iritis), Pale Conjunctive (anemia)

Mouth: Teeth and breath

Teeth	Breath
- Real or false	- Fetor (Bad breath)
- Loose fitting false teeth	> Fetor hepaticus; sweet smell of the breath and is an indication of hepatocellular failure

Mouth: Teeth and breath (cont)

- Decayed teeth > Ask patient to exhale through the mouth while you sniff a little of the air

Mouth

Lips

- Inspect mouth with a torch and spatula for angular stomatitis

Tongue

- Thickened epith. with bacterial debris and food particles commonly cause a coating over a tongue esp in smokers -> rarely a sign of disease

- **Aphthalous ulceration** is common. It begins as a small painful vesicle on the tongue/mucosal surface of the mouth, which may break down to form a painful shallow ulcer with surrounding erythema. They heal without scarring. They usually indicate any serious underlying systemic disease but may occur in Crohn;s disease or coeliac disease

- **Leucoplakia**: White colored thickening of the mucosa of the tongue and mouth, condition is pre-malignant -> causes: Sore teeth (poor dental hygiene), smoking, spirits, sepsis or syphilis

- **Glossitis**: Smooth appearance of the tongue which may also be erythematous-> appearance may be due to the atrophy of papillae and later stages may show ulceration, Changes occur due to nutritional deficiencies (e.g. Vitamin B12, folate or iron)

Mouth (cont)

- Fungal infection with *Candida Albicans* (thrush) causes a creamy white, curd like patches in the mouth or on the tongue, which are removed only with difficulty and leave a bleeding surface-> can be associated with immune deficiency (e.g. HIV)

Parotid gland inspection + Palpation

- Normal parotid gland is impalpable; enlargement leads to a swelling in the cheek behind the angle of the jaw and in the upper neck
- Examine for signs of inflammation (warmth, tenderness, redness and swelling) and decide whether the fascial swelling is lumpy or not
-> Alcoholic liver disease can cause bilateral parotid swelling
-> A mixed tumor (pleomorphic adenoma) is the most common cause of a lump. Parotid carcinoma may cause a fascial nerve palsy

Neck

- While patient is sitting up, palpate in the supraclavicular fossae for lymph nodes and feel over lower back for sacral edema
- Palpate cervical nodes one at a time from the front
- Palpate the supraclavicular nodes from behind: "Shrug your shoulders for me"

Chest

- In males: Gynecomastia or enlargement of the breasts maybe a sign of chronic liver disease. Tender gynecomastia is common when patients take the druge spironolactone
- Upper chest: Spider naevi
Spider naevi: consist of a central arteriole which radiate numerous small vessels that look like spiders legs. Can range in size from .5cm in diameter. Usual distribution in the area drained by the SVC, so they are found on the arm, neck or chest. Pressure applied with a pointed object to the contralateral causes blanching of the whole lesion, rapid refilling on release of pressure. Finding of more than 2 on the body is likely to be abnormal except during pregnancy. -> cirrhosis, most common alcohol.. Cherry angioma: Flat, slightly elevated circular spots that occur on the abdomen. They do not blanch on pressure, common and harmless

Arms

- At the wrist and forearms, inspect for scars
- Inspect the upper limbs for bruising . Large bruises (ecchymoses) may be due to clotting abnormalities (e.g. in chronic liver disease).
- Look for muscle wasting , which is often a late manifestation of malnutrition in alcoholic patients. Alcohol can also cause a proximal myopathy.
- Scratch marks due to severe itch (pruritus) are often prominent in patients with obstructive or cholestatic jaundice.

Hands

Pick up the patient's hands.

- Look for any rash.: Note any changes of arthritis . Arthropathy of the second and third metacarpophalangeal joints may be present in the hands of patients with the iron-storage disease haemochromatosis .
- Look for purpura , which is really any sort of bruising. The lesions can vary in size from pinheads called petechiae to large bruises called ecchymoses , as occurs in liver disease. If the petechiae are raised (palpable purpura), this suggests an underlying systemic vasculitis or bacteremia.
- Palmar erythema ('liver palms') is reddening of the palms of the hands affecting the thenar and hypothenar eminences. Often the soles of the feet are also affected. This can be a feature of chronic liver disease.
- Inspect the palmar creases for pallor suggesting anemia, which may result from gastrointestinal blood loss, malabsorption (folate, vitamin B 12), hemolysis (e.g. hypersplenism) or chronic systemic disease.
- Dupuytren's contracture is a visible and palpable thickening and contraction of the palmar fascia causing permanent flexion, most often of the ring finger. It is often bilateral and occasionally may affect the feet. It is associated with alcoholism (not liver disease), but is also found in some manual workers and may be familial.
- Note clubbing too

Hepatic flap

Ask the patient to stretch out the arms in front, separate the fingers and extend the wrists for 15 seconds. Jerky, irregular flexion-extension movement at the wrist and metacarpophalangeal joints, often accompanied by lateral movements of the fingers, constitutes the flapping of hepatic encephalopathy in liver failure.

Hands: rash, purpura, pale/red palms, contractures on hand, clubbing nails

