Abdominal Examination

Introduce yourself and the examiners, explain the procedure (have a look, feel and listen to your abdomen) and acquire informed consent.

Exposure is from the xiphisternum until the pubic symphysis (for privacy) or mid-thigh.

## Inspection

* **General status**

Of the patient, sick looking/fair general condition, nutritional status, respiratory distress, bedside apparatus (IV lines, catheter, ascitic tap bags, etc.)

* **From the foot of the bed**

Symmetry, flank fullness, distention, umbilicus (everted/flat/inverted), ask patient to cough while looking at the hernia orifices

* **From the side of the bed**

Bend down to assess movement with respiration and distention, scars, sinuses, rashed, engorged vessels, skin changes, striae, hair distribution in males

## Palpation

*(Ask the patient if they have any pain)*

* **Superficial palpation**

Assess each quadrant for tenderness and any obvious masses felt (if guarding: ask the patient to flex their knees and distract them by asking questions)

* **Deep palpation**

For any tenderness, masses

*\*if mass is felt describe site, shape, colour, consistency, contours, edges, temperature, tenderness*

* **Check for any rebound tenderness**
* **Organ specific examination**

Tell patient to breathe in and out (feel with inspiration, move with expiration)

**Liver span:** If cannot feel the lower edge below the sunchondral margin, percuss from the upper margin and then percuss downwards, measure the span *(normal is 8-12 cm)*

**Spleen:** Feel diagonally, measure from the mid-clavicular line to the tip of the spleen and confirm if mass is spleen based on the following:

* Cannot get above the mass
* Cannot be bimanually palpable
* Median notch
* Moves superficially and diagonally with inspiration
* Dullness to percussion
* Not ballotable

**Bladder:** Palpate

## Percussion

* Percuss over all 9 quadrants to assess for tympanic sounds of the abdomen
* If dullness elicited, test for shifting dullness (find area of maximum tympanicity, move laterally until dull note, turn the patient away, let fluid settle for 10 sec, then percuss again going back to the midline, turn the patient and percuss again for the tympanic note)
* Fluid thrill: Ask examiner to place their hand in the midline, assess for any thrills

## Auscultation

* Ascultate laterally to the umbilicus for bowel sounds for 1min *(normal: 2-3 mins)*, abdominal aorta for bruits (2cm left of the umbilicus), left and right renal arteries (2cm lateral and 1cm above the umbilicus)
* Ascultate over the liver for any bruits and the spleen for a splenic hum
* Carry out the succusion splash test

### Inguinal and Groin Region

Inspect the inguinal regions for any hernias, swellings, genitalia for any abnormalities, hair distribution.

Ask the patient to cough to elicit any hernias.

Palpate the inguinals and ask to cough to feel for direct and indirect hernias, lymph nodes and the genitalia.

#### Complete the examination by performing a **Digital Rectal Examination**

Thank the patient, assist in covering up and summarize your findings.

## Hepatomegaly

*Normal liver span: 12-15cm*

Causes of hepatitis include:

* Chronic parenchymal liver disease:

Alcoholic liver disease, viral hepatitis, autoimmune hepatitis, primary biliary cirrhosis, hepatic steatosis

* Malignancy:

Hepatocellular carcinoma, sec. from breast, colon, lung

* Hematological disorders:

Lymphoma, leukemia, polycythemia and myelofibrosis

* Right heart failure
* Rare:

Amyloidosis, sarcoidosis, glycogen storage diseases

**Investigations:**

LFTs, Alkaline phosphatase (tumors), FBC (bleeding disorders), CT Abdomen, Hepatitis B serology, Abdominal Ultrasound

## Splenomegaly

Causes of splenomegaly include:

* Massive: Chronic myeloid leukemia, malaria, visceral leishmaniasis, thalassemia
* Moderate: Rickets, lymphoma, amyloidosis, infarcts
* Others: Sickle cell disease, SLE

**Investigations:**

FBC (infections, anemia), Blood films (malarial parasite, amastigotes), US (infarcts, amyloidosis), splenic biopsy

## Ascites

Causes are based on Serum-Ascites Albumin Gradient

* < 1.1 g/dL

Biliary leak, nephrotic syndrome, pancreatitis, tuberculosis, peritoneal carcinomatosis

* SAAG >/= 1.1g/dL, ascitic protein < 2.5 g/dL

Cirrhosis, late Budd Chiari syndrome, massive liver metastasis

* SAAG >/= 1.1g/dL, ascitic protein > 2.5g/dL

Heart failure/constrictive pericarditis, early Budd Chiari syndrome, IVC obstruction, sinusoidal obstruction syndrome

Others: Protein-losing enteropathy, severe malnutrition, malignancies (ovary Ca)

**Investigations:**

SAAG, ascitic fluid biochemistry & M/C/S, lactate dehydrogenase, FBC (infections), glucose

## Chronic Liver Disease Stigmata

* **Hands**

Leukonychia, finger clubbing, palmar jaundice/erythema, asterixis, dupuytren’s contractures bruising

* **Face**

Scleral jaundice

* **Chest**

Gynaecomastia (in men), breast atrophy (in women)

* **Abdomen**

Hepatomegaly (but may be small), ascites, spider naevi, dilated collateral vessels around the umbilicus

* **Genitalia**

Testicular atrophy

* **Legs**

Oedema, hair loss, bruising