Abdominal Examination

Being able to perform a competent examination of the abdomen is one of the most important skills to accomplish at medical school. There are a lot of things that can go wrong within the abdomen, and equally there are many ways of determining what exactly is happening. Be systematic, thorough and don't jump to any conclusions!

As with all examinations the best way to become proficient is to practice until you find a routine that works for you. I'm strongly of the opinion that there is no one way to do an exam, rather it is a personal process that you develop over time with experience. Once you have found a way you like to do it, do it the same way every time to reinforce it effectively. This is my way of doing it, so feel free to chop and change as you wish!

Introduction

- Wash your hands and show your name badge to the examiner
- Introduce yourself, with name and role
- Confirm that you have the right patient in front of you, with name and age
- Explain why you've come to see them.
- Gain consent to do the examination, and you may offer a chaperone if you feel this would make the patient more comfortable
- Ask if they are in any pain at present, and to tell you if it becomes too uncomfortable to continue
- Ensure your patient is sat at 45 degrees, and exposed adequately.

    - Some say ‘nipple to knee’ but in reality as long as you can see the whole abdomen down to the pubic symphysis, patient dignity should be maintained.

General Inspection

Arguably the most important part. After a while you will be able to diagnose many conditions on inspection alone.

- Looking around the bed for things the patient has brought with them will give you a clue as to their current function, and what pathology might underly their presenting complaint
    - Medications
    - Inhalers
    - Pumps
    - Walking stick
    - Prostheses
    - Stoma bags
    - Drains
    - NG tubes
- The patient
    - Are they comfortable at rest?
    - Are they obese/malnourished?
    - Are they short of breath?
    - What colour are they?
        - Blue – cyanotic
        - Yellow – jaundiced – liver disease
        - Grey – iron infusion, haemochromatosis

        - Pale – anaemia – liver disease, GI bleed, Malabsorption
    - Can you hear anything?
        - metallic valves
        - stridor
        - wheeze
    - Are there any obvious scars or wounds?
    - Any visible abdominal masses?
        - Transplanted organs
        - Organomegaly
        - Cysts
        - Pulsating abdominal aorta
            - normal in thin people

Hands

The hands will give you an idea of the chronicity of a disease as clubbing and nail changes do not occur acutely.

- Clubbing
    - Cirrhosis
    - Inflammatory Bowel Disease
    - Malabsorption
    - Hepatopulmonary syndrome
- Nail changes

    - Leukonychia
        - lack of protein
        - ulcerative colitis
        - trauma
        - ?zinc deficiency
    - Koilonychia
        - iron-deficiency anaemia
        - Plummer-Vinson syndrome
- Palm colour
    - Palmar erythema
        - Portal hypertension
        - Liver disease
        - Hyperthyroidism
        - Rheumatoid arthritis
        - Pregnancy
        - Polycythaemia
- Dupuytren's contracture
    - Associated with:
        - manual labour
        - alcohol excess
        - familial
- Liver flap
    - Postural failure due to encephalopathy
        - Uraemia
        - Hepatic encephalopathy

Arms

- Bruising
    - suggests poor clotting
        - liver disease
- Needle marks
    - risk of IVDU/HIV/Hepatitis
- Excoriations
    - scratching due to pruritus
        - liver disease
- Hair loss from axillae
    - caused by
        - malnourishment
        - iron deficiency anaemia
    - acanthosis nigricans
        - GI adenocarcinoma
        - Obesity

Eyes

- Corneal arcus
    - normal with increasing age
        - hypercholesterolaemia

- Xanthelasma
    - elevated lipids
        - Hypercholesterolaemia
- Jaundice
    - yellow sclerae
        - haemolysis
        - liver disease
        - biliary obstruction
- Kayser-fleischer rings
    - rare
        - Wilson’s disease

Mouth

- Anaemia
    - pallor of the underside of the tongue
- Angular Stomatitis
    - inflammation of mouth corners
        - iron/B12 deficiency
- Glossitis
    - beefy tongue
        - iron deficiency anaemia
- Ulcers
    - ask about these
        - Crohn’s disease

- Parotid hypertrophy – alcohol

Neck

- Virchow's node
  - left supraclavicular lymph node
    - GI malignancy
- Lymphadenopathy
  - may suggest
    - infection
    - malignancy
- JVP
  - may be raised in
    - liver disease

Chest

- Gynaecomastia
  - breast tissue develops in
    - liver disease
    - salbutamol
    - digoxin
- Hair loss
  - seen in
    - liver disease

        - malnourishment
- Spider Naevi
    - cherry red with wispy ‘legs’ – need more than 5 to be pathological
        - liver disease

Abdomen

- Scars
- Bruising
- Swelling and distension
- Prominent abdominal wall veins
    - Occlude the veins and ‘milk’ them to empty them, and see how they refill.
        - Caput medusae refill towards the legs
        - Inferior vena cava obstruction – refill towards the head

NOW REPOSITION THE PATIENT SO THEY ARE LYING FLAT

People do the next bit differently depending on personal preference. I like to go organ-by-organ, palpating and percussing the liver, then the spleen etc – others like to do all of palpation, then all

of percussion. Either is fine, just remember to do it all! I've written it here as palpation then percussion.

Palpation

- Palpate the 9 regions of the abdomen, beginning away from painful areas
    - superficial palpation while watching patient's face
        - guarding
        - rigidity
        - rebound tenderness
            - all signs of peritonitis
    - deep palpation for abdominal masses
        - Describe any mass by:
            - Size
            - Shape
            - Location
            - Outline
            - Consistency
            - Mobility
            - Pulsatility
            - Overlying skin (rashes/reaction)
            - Temperature
            - Auscultation – bruit?
- Liver
    - use radial border of index finger, starting at the right iliac fossa
        - press in, and tell patient to inhale, feeling for liver edge against your hand

        - repeat, moving hand towards right costal margin each time until the costal margin is reached
- Spleen
    - use same technique for splenic palpation, beginning in the right iliac fossa but moving towards the left costal margin
        - Features of spleen on palpation:
            - can't get 'above' it (under ribs)
            - smooth edge with notch
            - moves down on inspiration
            - dull to percussion
            - if palpable, spleen is 50-100% enlarged
- Kidneys
    - Using one hand to press into the abdomen, use the other to gently flip (ballotting) the kidney against the superior hand, and feel for an impulse. Normal kidneys aren't ballottable except for particularly thin patients.
- Aorta
    - gently press two thumbs above the umbilicus and feel for a pulsation
        - pulsation (moves thumbs up and down) is normal
        - expansion (moves thumbs apart) is pathological

Percussion

- Percuss for the liver and the spleen
    - Liver
        - lower four ribs should be dull depending on level of inspiration
    - Spleen
- Percuss for the bladder

    - ask patient if they need to urinate first!
    - begin at the umbilicus and percuss towards pubis. Dullness suggests a full or distended bladder

Test for ascites

Ascites is fluid in the peritoneal cavity that may cause distension. Remember the differential for a distended abdomen:

- Fluid
- Fat
- Faeces
- Foetus
- Flatus
- Fire (inflammatory mass)
- F*** (malignancy)

- Percussion
    - percuss over the umbilical region, which will be resonant in ascites as the air bubble sits at the highest point
    - percuss round towards the flank, and note the point at which the tone becomes dull – this is the fluid level
- Shifting dullness

    - ask patient to roll onto their side (I get them to roll towards me and put their hand on my shoulder for stability)
    - The air bubble should now have moved round to the new highest point at the flank. Percussion of the flank should now be resonant and the new fluid level discovered towards the umbilicus
- Fluid thrill
    - tapping on one side of the abdomen sends a shock wave through the abdominal fluid that is palpable on the other side. Usually only possible in massive ascites.

Auscultation

- Auscultate for
    - bowel sounds
    - renal bruits
    - aortic bruits
    - venous hum (portal hypertension)

Finishing up

- Check for leg swelling
    - pitting oedema in liver failure
- Thank the patient
- Sit them back up and help them get dressed

- Wash your hands

Practise, Practise, Practise!