Gastrointestinal System Examination

- Refer to Macleod's videos on JU clinical.

Before any examination make sure to: introduce yourself, take permission, ensure privacy & illumination, warmth of the room and good hand hygiene.

Comment: After introducing myself, taking permission from the patient, ensuring good privacy and illumination, warmth of the room, washing my hand, I will now start my examination by being on the right side of my patient.

General examination:

- Make sure that the patient is in the correct position & exposure:
  - **Position:** semi-sitting position (45°)
  - **Exposure:** from the xyphsternum till symphsis pupis
- Ask about consciousness and orientation (place, time and person)→ (hepatic encephalopathy)
  - بتعرف وين المكان اللي انت فيه حاليا؟
  - احنا حاليا صبح ولا مسا؟ او بتعرف كم الساعة تقريبا؟
  - بتعرف انا ايش بشتغل او تأشر على الدكتور مثلا وتسأله عنه؟
- Ask yourself these questions:
  - Is the patient in pain or distressed? (shallow breathing, hyperventilation, etc)
  - Cachectic or obese ?
  - Obvious Pallor or Jaundice ?
  - Obvious tubes or drains?
  - Moving or Lying still; Itching; Sweating; Rigors?

Comment: my patient looks conscious, alert, oriented to place, time and person, lying comfortably on his bed, not in distress not in pain, not jaundice, not pale, not cachexic, well nourished, no specific odors, no muscle wasting.

Vital signs:

- Blood pressure
- Respiratory rate: (normal 12 – 20 breath per minute)
- Pulse rate: radial pulse over one minute
- Temp. (if it high it indicates infection)
- Measure the weight and height then calculate the BMI, you may also measure the waist circumference.

Hands:

- Nails:
    1. Clubbing (IBD)
    2. Koilonychia (ID anemia)
    3. Leukonychia (hypoalbuminemia, protein)
    4. Malnutrition, malabsorption, nephrotic syndrome
    5. Tar staining
- Dorsum of the hand:
    1. Temperature difference
    2. Tremor: fine tremor or Asterixis → Hepatic encephalopathy
- Palms:
    1. Palmar erythema
    2. Dupyturens contracture→ Alcohol related chronic liver disease
- forearms':
    1. Needle marks IV Drug abuse
    2. Signs of bruising
    3. Tattoos
    4. Fistulae
    5. Hair distribution
    6. Muscle wasting
    7. Scratch marks

Face:

- Eyes:
    1. Conjuctiva→ Pallor
    2. Corneal Arcus
    3. Keiser-Fleischer Ring → Wilsons disaese
    4. Sclera → Jaundice
- Mouth:
    1. Ulcers or Angular Stomatitis (iron deficiency anemia)
    2. Tongue: Glossitis (B12 deficiency); Beefy tongue
    3. Poor dental hygiene or Caries
    4. Obvious Smells: Fetor Hepaticus, Alcohol, Uremia, or Ketones
    5. Pallor or Jaundice
    6. Parotid gland swelling (sialadenosis) → alcohol + bullemia.

Neck:

- Lymph nodes:
    1. Supraclavicular LN: Virchow's node metastatic tumor to Lt supraclavicular node→ (classically due to gastric cancer & pancreatic cancer).
    2. JVP: elevated in HF (suggests cause of hepatic congestion).

3. Axillary lymph node.
4. Inguinal lymph node.

- Chest :
    1. Spider Naevi
    2. Gynecomastria and testicular atrophy in men
    3. Breast Atrophy
    4. Hair loss (axillary and pubic)

Comment:

- **Hands:** there is no nail changes such as: Clubbing, koilonychias, Leukonychia, tar staining , no clubbing or any other nail abnormalities, there is no tar staining, the temp is normal, no muscle wasting was noticed.
- Now ask the patient to hold his hand extended at wrist والأصابع متباعدة and comment: There is no flapping tremor or Asterixis .
- There is no Palmar erythema, no Dupyturens contracture, no bruises, no tattoos, no signs of IV drug abuse, no fistulae, normal hair distribution.
- **Eyes:** no Conjunctival Pallor, no Corneal Arcus, no Keiser-Fleischer Ring, no Jaundice.
- **Mouth:** no mouth Ulcers, no angular stomatitis ,no Glossitis , good dental hygiene , no Caries, no Obvious Smells ,no Parotid gland swelling, no masses,
- **Neck:** no lymph node enlargement , normal JVP .
- **Chest:** no Spider Naevi ,no gynecomastia, no testicular atrophy in males, no breast atrophy in females , no Hair loss .

Abdomen:

I ask the patient to take a deep breath:

- ## Inspection:

From the foot of the bed comment on:

1. Symmetry
2. Shape of the abdomen
3. Pattern of breathing

Comment: Symmetrical bilateral abdominal movement.
Umbilicus: centrally located midway between xyphsternum & symphesis pubis &if its inverted / everted.

Also comment:

- 4Ss:
    1. Scars & if there was a scar →-location + length & for which surgery + color
    2. Stoma
    3. Stria →due to pregnancy (white) /in cushings disease (purple) .
    4. Scratch marks

- Bruises
- At the level of abdomen → visible pulsation (at the epigastrium →mass indicates AAA) + visible peristalsis. أنزل لمستوى بطنه
- Caput medosa
- Visible masses
- **Perform 2 Maneuvers:**
  1. Cough Impulse (ask the patient to cough and look at the if is any umbilical or inguinal hernia)
  2. Divarication of Recti (ask the patient to tilt his head) تخليه يهم

Comment: There is no scars, no stoma, no stria, no scratch marks, no bruises, no visible pulsation, no visible peristalsis, no caput medusa, no visible masses.
Ask the patient to cough and look if there is any umbilical or inguinal hernia → no umbilical or inguinal hernia.
Ask the patient to tilt his head → no divarication of recti.

- ## Palpation:

Always remember to:

- Warm your hands, ask for permission and Maintain EYE CONTACT.
- Ask for a chair and sit or kneel down at the Rt side of the patient
- The whole hand should rest on the abdomen by keeping the hand and forearm horizontal, in the same plane as the front of the abdomen.
- Ask if there is any pain, begin the exam away from the area of maximum tenderness.

1. Superficial Palpation :

- Start at RIF (or most distal site to pain) and move systemically around all 9 regions
- Done to gain the confidence of the patient
- Note the tone of abdominal muscles and guarding, tested through light, dipping movements with the fingers.
- Superficial Tenderness
- Superficial masses. If a mass is found then you must comment on it.

2. Deep Palpation

Repeat the exam with deeper palpation.
Notice if there is any:

- Deep Tenderness
- Deep masses. A mass in a particular abdominal quadrant suggests a specific diagnosis.
- Rebound tenderness: tenderness that occurs when the examining hand is quickly removed from the abdominal wall (the sudden withdrawal of manual pressure). It is indicative of acute peritoneal irritation.

Comment: there is no superficial masses, no tenderness, no deep masses, no guarding no rigidity, no rebound tenderness.

3. Palpation of the normal solid viscera:

A. Liver:

- Place your Rt hand transversely and flat on the skin of the RIF. Ask the patient to breathe in deeply through the mouth and feel for the liver edge as it descends on inspiration. Move your hand progressively up the abdomen, 1 cm at a time, between each breath the patient takes, until you reach the costal margin or detect the liver edge.
- A normal edge is smooth and sometimes slightly tender if palpated.
- Describe the size and surface (smooth/nodular) of the liver if palpable, its consistency and tenderness.
- Percuss for the upper edge of the liver starting at the middle of the clavicle until you find dullness.
- Measure the liver span, it is normally 6-12 cm. It may be diminished in a patient with cirrhosis whereas →hepatomegaly is detected in hepatic congestion (due to HF).

B. Spleen:

- Start at the RIF and, using the same method used to palpate the liver, move diagonally towards the Lt 10th rib.
- If you cannot feel the splenic edge, ask the patient to roll towards you and on to his right side and repeat the above. Palpate with your right hand, placing your left hand behind the patient's left lower ribs, pulling the ribcage forward.
- **Special maneuver:** Percuss over the lateral chest wall (over 9th, 10th and 11th ribs, midaxillary line) to confirm or exclude the presence of splenic dullness.

C. Kidneys:

- Place your Lt hand behind the patient's back below the lower ribs and your Rt hand anteriorly on the right side of the abdomen just below the level of the ASIS. As the patient breathes in and out, palpate the loin between both hands.
- Feel for the lower pole of the kidney moving down between your hands. If this happens, gently push the kidney back and forwards between your two hands to demonstrate its mobility. This is ballotting, and confirms that this structure is the kidney.
- Ask the patient to sit up. Palpate the renal angle (between the spine and 12th rib posteriorly).
- With moderate force, firmly strike the renal angle once with the ulnar aspect of your closed fist after warning the patient. Note any discomfort.
- Repeat this on the Lt side.
- Percussion of the kidneys is unhelpful. Percuss for the bladder over a resonant area in the upper abdomen in the midline and then down towards the symphysis pubis. A change to a dull percussion note indicates the upper border of the bladder.

Comment:

- **Liver:** liver span is 8 cm by percussion. (No hepatomegaly), smooth surface non tender
- **Spleen:** no splenomegaly, non-tender
- **Kidney:** non tender, smooth surface, no masses .

- **Percussion:**

➢ Percussion over the 9 regions of the abdomen.

➢ Test for ascites:

1. **Shifting Dullness:**
   - Percuss from the midline (most resonant area) to the flanks. Note any change from resonant to dull.
   - Keep your finger on the site of dullness in the flank and ask the patient to turn to the opposite side.
   - Pause for 10 seconds to allow any ascites to gravitate, then percuss again.
   - If the area of dullness is now resonant, shifting dullness is present, indicating ascites.
2. **Transmitted thrill:**
   - Ask the patient to place the edge of their hand on the midline of the abdomen and place the palm of your left hand flat against the left side of the patient's abdomen and flick a finger of your right hand against the right side of the abdomen.
   - If you still feel a ripple against your left hand, a fluid thrill is present (only detected in gross ascites).

Comment: no shifting dullness, no Transmitted thrill, normal tympanic note all over the abdomen.

- **Auscultation:**

➢ Bowel Sounds:
- Normal bowel sounds are low-pitched gurgles which occur every few seconds.
- Listen at the Rt of the umbilicus for up to 2 minutes before concluding that bowel sounds are absent.

➢ Bruits (most important)
- Above the umbilicus at the aorta → for AAA
- 2–3 cm above and lateral to the umbilicus →for bruits from renal artery stenosis.
- Listen over the liver for bruits or Friction Rubs.
- Listen over the splenic for bruits.

➢ Succussion Splash:
- It sounds like a half-filled water bottle being shaken. Explain the procedure to the patient, then shake the patient's abdomen by lifting him with both hands under his pelvis.
- An audible splash indicates→ gastric outlet obstruction or gastric paresis. The patient must not have eaten anything for the past 4 hours.

Comment: normal bowel sounds, no bruit, no succution splash, no friction rub.

Finally and after performing the abdominal examination, you must mention that you want to examine the following:

1. Inguinal lymph nodes : → - Hernia (inguinal)
   - Enlarged LN
   - Femoral pulses: femoral artery stenosis bruit.

2. Genitalia looking for → Testicular atrophy
3. Anal canal and rectum → Perrectal exam
4. Back for sacral edema.
5. Lower limbs : → Edema
   → Hair loss
   → Bioderma gangernosum

Comment: say that your exam will not be completed unless you do the above.

Done by: Al-rumaysa Al-sir Al-haj
Edited by: Jawaher Alsaqer
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