NR 23

Assessment of the Abdomen

The Abdomen

Abdominal Cavity

The body systems in the abdomen
- Gastrointestinal
- Urinary
- Reproductive
- Vascular

The Gastrointestinal System
- Alimentary canal
  - Mouth
  - Pharynx
  - Tongue
  - Esophagus
  - Stomach
  - Small and large intestine
  - Anus

- Accessory organs
  - Teeth and Salivary glands
  - Liver
  - Gallbladder
  - Pancreas

- Esophagus

- Stomach
  - Fundus
  - Body
  - Antrum
- Small Intestine
  - Duodenum
  - Jejunum
  - Ilium

- Large Intestine
  - Cecum
  - Colon
    - Ascending
    - Transverse
    - Descending
    - Sigmoid
    - Rectum

- Accessory Digestive Organs
  - Liver

- Gallbladder

- Pancreas

- Other Related Structures
  - Peritoneum
    - Visceral
    - Parietal
  - Abdominal muscles
Spleen

Aorta

Kidneys

Ureters
Bladder
Costoveterbral angle

Reproductive organs

Inside the abdominal cavity

Solid viscera

Hollow viscera

Landmarks for Assessment
1. Xiphoid process
2. Costal Margin
3. Umbilicus
4. Iliac crests
5. Pubic bone

Mapping

RUQ
RLQ
LUQ
LLQ
PHYSICAL ASSESSMENT OF THE ABDOMEN

Equipment:

Assessment techniques used:

Subjective history:
1. ___________________________________________________________
2. ___________________________________________________________
3. ___________________________________________________________
4. ___________________________________________________________
5. ___________________________________________________________
6. ___________________________________________________________
7. ___________________________________________________________
8. ___________________________________________________________
9. ___________________________________________________________

Ask client to void
Drape gown to expose the abdomen from chest to pubic bone

**Inspection**

1. **Contour and Symmetry**

CONTOUR-Stoop and gaze across abdomen and note contour from costal margin to pubic bone

   NORMAL
   - Flat
   - Rounded

   ABNORMAL
   - Protuberant (ascites, tumors)
   - Scaphoid (starvation, subcutaneous fat is replaced muscle)

SYMMETRY Stand on patient’s right side and look down on abdomen
   Shine a light lengthwise and assess for shadows or bulges
   Step to the foot of the bed
   Abdomen should be smooth and symmetrical with no visible masses

2. **Movement**- As you are inspecting look for movement in the abdomen

   NORMAL MOVEMENTS
   - Pulsations of the aorta at the midline (only in thin people)
Peristaltic rushes (thin people)

Respiratory movement in males or in a patient with relaxed muscles

3. Lesions/scars—look for moles, lesions, scars…note location, measure in centimeters

Straie-silvery white linear jagged marks occur when elastic fibers are broken with rapid growth

4. Vessel pattern—should be non-visible or flat if seen

5. Skin color and hair distribution—Should be homogenous. Pubic hair will be a diamond shape in males, inverted triangle in females. Skin color should be consistent with rest of body

ABNORMAL SKIN—red (localized inflammation), jaundice (shows best in daylight)

6. Condition of the umbilicus—Should be midline, inverted without signs of discoloration, inflammation or hernia

ABNORMAL—everted (asities or underlying mass pushed it upward) a normal finding with pregnancy, enlarged and everted with a hernia, bluish color with abdominal bleeding (Cullen’s sign)

Hernia—bulge that occurs when person coughs or raises head and shoulders

Auscultation
Perform next prior to percussion and palpation as they may create false interpretation of bowel sounds

1. Bowel sounds—sounds created by air and fluid movement in the bowel, listen in all four quadrants

Use the diaphragm, press lightly

Begin in the RLQ in the ileocecal valve

Listen in this area until you hear sounds, may take 5-20 seconds up to 1 minute, if not heard in 1 minute move to next quadrants

Classify BS as Normal, hypoactive or hyperactive, absent

Normal—Sound like high pitched gurgling cascading sounds occurring 5-30 times a minute

Hyperactive—occurs in diarrhea

Hypoactive—sluggish bowel

Absent—paralytic ileus…must listen for full five minutes

2. Bruits and venous hum

Venous hum—continuous medium pitched tone created by blood flow in an engorged organ like the liver
Bruits- vascular blowing sounds, like a murmur
  - Aorta
  - Right and Left artery
  - Right and left Iliac artery
  - Right and left Femoral artery

**Percussion** Start around the umbilicus and percuss in a circular pattern over the entire abdomen in all four quadrants note the:

1. **Gas pattern**- Tympany should predominate because of air in intestines
2. **Masses** this would be dullness in areas that should have tympany
   Any areas of hyperresonance indicates gastric distention.

3. **Organ location**- dullness over areas of organs, can find the spleen and the liver and percuss to identify their size

**Spleen**
Roll patient midway to the right so that they are lying between the supine and right lateral position
Percuss the 9th to 11th ICS posterior to the left mid axillary line and listen for resonance to change to dullness
Then percuss the lowest ICS in the left anterior axillary line-should note tympany
Ask pt to take a deep breath and should still hear tympany

**Liver** (2 methods to map out the liver borders)
1. Begin in area of resonance in the upper thorax along the right midclavicular line and percuss down intercostals spaces until sound changes to dullness-mark the spot with a pen (5th ICS 2 cm below nipple, MCL) This is the upper liver border
   Then find abdominal tympany at the midclavicular line, percuss up until tympany changes to dullness (usually at the right costal margin) mark with pen-this is the lower liver border
   Measure between these spaces-normal range 6-12 cm-the liver span

2. Alternate method-scratch test:
   Helps to define the liver border when the abdomen is distended or muscles are tense
   Begin by placing stethoscope over the liver (between the right costal margin and 5th ICS, MCL)
   With one finger scratch short strokes over the abdomen beneath the costal margin starting in the RLQ upward towards the liver
   When scratching is heard louder, you have crossed the lower border of the liver
Palpation - Normal patient is non tender to both light and deep palpation

1. Light palpation
   Bend patients knees (relaxes muscles)
   Use the first four fingers and depress 1 cm
   Use a gentle rotary smooth motion over all four quadrants, examining reported painful area last. As you palpate note the persons facial characteristics and Note any
   Tenderness (note by location…RUQ, etc)
   Muscle resistance/rigidity (guarding can be voluntary which is bilateral from a ticklish person to involuntary…resistance and rigid muscle)
   Masses if found note to its location, size, shape, consistency soft, form, hard), mobility, pulsatility, tenderness

2. Deep palpation
   Using the same hand press harder but do not jab. Press about 2-3 inches
   Move clockwise note any
   Masses (f found note to its location, size, shape, consistency soft, form, hard), mobility, pulsatility, tenderness
   Pulsations-normal from the aorta
   Organs-Normally palpable organs are the:
   Liver edge
   R kidney lower pole
   Cecum (ascending colon)
   Sigmoid colon
   Full bladder or gravid uterus

3. Bimanual Palpation
   Needed for when deep palpation is difficult. Place one hand over the over, let the hand relax that touches the abdomen and let the overlaying hand guide the pressure

Liver
   o Place left hand under patient’s back parallel to the 11\textsuperscript{th} and 12\textsuperscript{th} rib and lift
   o Place right hand on the RUQ beneath the right costal margin and push deeply
   o Ask patient to take a deep breath (brings liver down)
   o May be able to feel the firm ridge
May also use the hooking technique

- Stand at the client’s right facing their feet
- Place both hands side by side below the area of liver dullness hooking over the costal margin
- Ask client to inhale and press fingers in and upward in attempt to feel liver

**Spleen (LUQ)**

- Stand at patient’s right side
- Reach over the patient and place left hand under the left costal margin and gently pull upwards
- Place your right hand in the LUQ fingers pointing towards the axilla below the costal margin
- Ask patient to take deep breath and push upward to palpate - should feel nothing

Although this is a percussion technique, it is performed last due to position change of the patient

**Kidney**

Have patient sit up
Move to their back

Percuss for **CVA (costoverterbral angles)**

- Place hand over 12th rib at the costoverterbral angle
- Thump with ulnar edge of fist
- Should cause no sharp pain