Abdominal Exam

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Abdominal Exam

- 4 Elements: **Observation, Auscultation, Percussion, Palpation**
- **Pelvic, male genital & male/female rectal** exams are all **critical** parts of Abdomen exam → covered **later in the year**
GI Review of Systems

• http://meded.ucsd.edu/clinicalmed/ros.htm
Surface Anatomy

- Umbilicus
- Epigastric Area
- Supra-Pubic Area
- Right Upper Quadrant
- Left Upper Quadrant
- Right Lower Quadrant
- Left Lower Quadrant

- Stomach
- Spleen
- Transverse Colon
- Aorta
- Descending Colon
- Ascending Colon
- Xiphoid Process
- Right Costal Margin
- Left Costal Margin
Observation & Draping

• Exposure → Drape for success – expose what you need to see!

• Use sheet to cover lower 1/2

• Good lighting, warm room, table flat, hands at side, head resting on table

• +/- Feet flat on table
Observation (cont)

• Make note of:
  – general shape
  – contours
  – symmetry
  – color
  – scars

• easiest to make observations from foot of bed.

• Examine from right side
Examples of Abnormal Findings On Observation

Obese

Ascites (fluid), Yellow

Enlarged gall bladder

Umbilical Hernia (Right with Valsalva)
Auscultation

- Normal **intestinal propulsion** of food (peristalsis) generates noise (Borborygmi)
- **Listen** (diaphragm of stethoscope) x 15-20 seconds in **4 quadrants**
- Pay attention to: **presence**, quantity (normal ~ 2-5 seconds), & **quality** of sounds
Auscultation (cont)

- Clinical utility:
  - Intestinal Obstruction: Increased frequency early (“rushes”) → declines in quantity, increase pitch (“tinkles”) → stop
  - After handled (surgery) → no function or noise (ileus) → w/normal recovery, noise returns
  - Infection of mucosa (gastroenteritis) → increased frequency

- No findings pathognomonic
- Auscultation not helpful in otherwise normal exam
- Clinical context most important
Auscultation (cont)

- **Bruit**s - sounds of **turbulent** arterial flow → **atherosclerosis**
- Listen over:
  - **Renal arteries** (several cm above umbilicus, either side rectus)
  - **Iliac arteries** (below umbilicus)
Percussion

• Same principle as Lung
• **Tapping** over **solid** or **liquid** filled structure → **dull** tone; **air** filled → **tympanitic** (resonant)
• **Percussion** → what’s beneath
  skin & bones – e.g: liver → dull; air filled stomach → tympanitic
• Abdomen not designed w/1st yr med students in mind!
  - Important **solid structures protected**: liver & spleen by ribs; pancreas & kidneys deep in retro-peritoneum; bladder & uterus in pelvis
  - **Central abdomen** filled w/**intestines**: freely moving → promotes peristalsis, tolerates direct trauma
Percussion Technique

• Stand on R
• Middle finger of non-percussing hand firmly against abdomen
• Using floppy wrist action, hammer middle finger of other hand down, aiming for last joint
• Percuss all 4 quadrants – normal =‘s mix of dull and tympanitic
• **Liver span (6-12 cm)** – **Start in chest**, below nipple (mid-clavicular line) & **move down** – tone **changes from resonant** (lung) to **dull** (liver) to **resonant** (intestines)

• **Spleen** – small, located in hollow of ribs – percussion over **last intercostal space**, anterior axillary line should normally be **resonant** – dullness suggests splenomegaly

• **Stomach** – tympanitic
Percussion – Shifting Dullness

- Detect **large amounts** of pathological **fluid** (ascites)
- **Intestines** will **float** to surface
- Percussion can detect **air-fluid interface**
- Change in position shifts point of **interface**
Palpation

- **Most** important structures aren’t palpable
- **Warm** your hands
- Generally **right hand** used (left placed on top or @ your side)
- **Palpate using pads & edges of middle 3 fingers**
- **Gentle pressure**, no sudden movements
- Think about **what “lives”** in **area** you’re examining
Palpation Technique

• First explore **superficial aspect** each quadrant
  (start R lower → R upper → L upper → L lower)

• **Deeper** palpation
  **Liver**
  – **Start** R lower, moving up towards R ribs
  – **Move** hands a few cm up w/each palpation
  – **Push down** (posterior) & then **towards head**
  – As approach ribs, **palpate while** patient **inspires**
    deeply (diaphragm brings liver down towards hand)
  – Might feel **liver edge** in normals (usually not)
Palpation Technique (cont)

• Deeper Palpation (cont)

  **Spleen**
  – Palpate towards left upper quadrant from midline & below - use L hand to “pull” spleen towards you

  **Aorta**
  – Above umbilicus, left of midline
  – Push down (deep) w/palpating hand

  **Remainder of abdomen**
  – **Uterus, bladder**, other (rarely palpable)

• Evaluate **painful areas** last!
Palpation/Percussion Of The Kidneys

- **Kidneys** are retroperitoneal structures, deep & protected by the ribs → rarely palpable
- If markedly enlarged, may appreciate in lateral aspects abdomen (rare)
- Assess for tenderness via posterior approach, tapping on back at **Costo-Vertebral Angle** – if kidney infected (pyelonephritis), patient will have Tenderness (CVAT)
Put Findings Together → Paint The Best Picture

Abdominal exam techniques compliment each other!

• **Ascites**
  – Observe distention, bulging flanks
  – Palpation → no evidence of mass
  – Percussion → shifting dullness

• **Enlarged liver** (hepatomegaly)
  – Percussion indicates extension of liver below diaphragm
  – Palpation confirms location of lower edge (also detects contour, texture)
Summary Of Skills

- Wash Hands
- Observe abdomen (shape, contours, scars, color, etc)
- Auscultate abdomen (bowel sounds, bruits)
- Percuss abdomen (general; then liver & spleen)
- Palpate 4 quadrants abdomen (superficial then deep)
- Assess for kidney area pain (CVAT)

Time Target: < 10 Minutes