

Abdominal Issues

Basic Disaster First Aid

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Objectives

- Describe gross abdominal anatomy by quadrants
- Distinguish between benign and red flag symptoms
- Describe treatment for abdominal trauma, both open and closed
- List common abdominal illnesses, their symptoms, and treatment
- List evacuation considerations

Abdominal Issues

Big Picture

- Illnesses and injuries ranging from mild to fatal
- Large vascular organs (liver, spleen, etc.) that if damaged can extensively bleed
- A “black box” that can make diagnosis difficult; tough in the hospital, even tougher in the field
- Field treatment, even if assessment accurate, very limited, beyond supportive care
- Bottom line: It may be impossible to diagnose specific issue, but treatment is generally supportive care and possible evacuation
- Big question: Stay and deal, evacuate, or emergency evacuation?

Abdominal Anatomy Quadrants

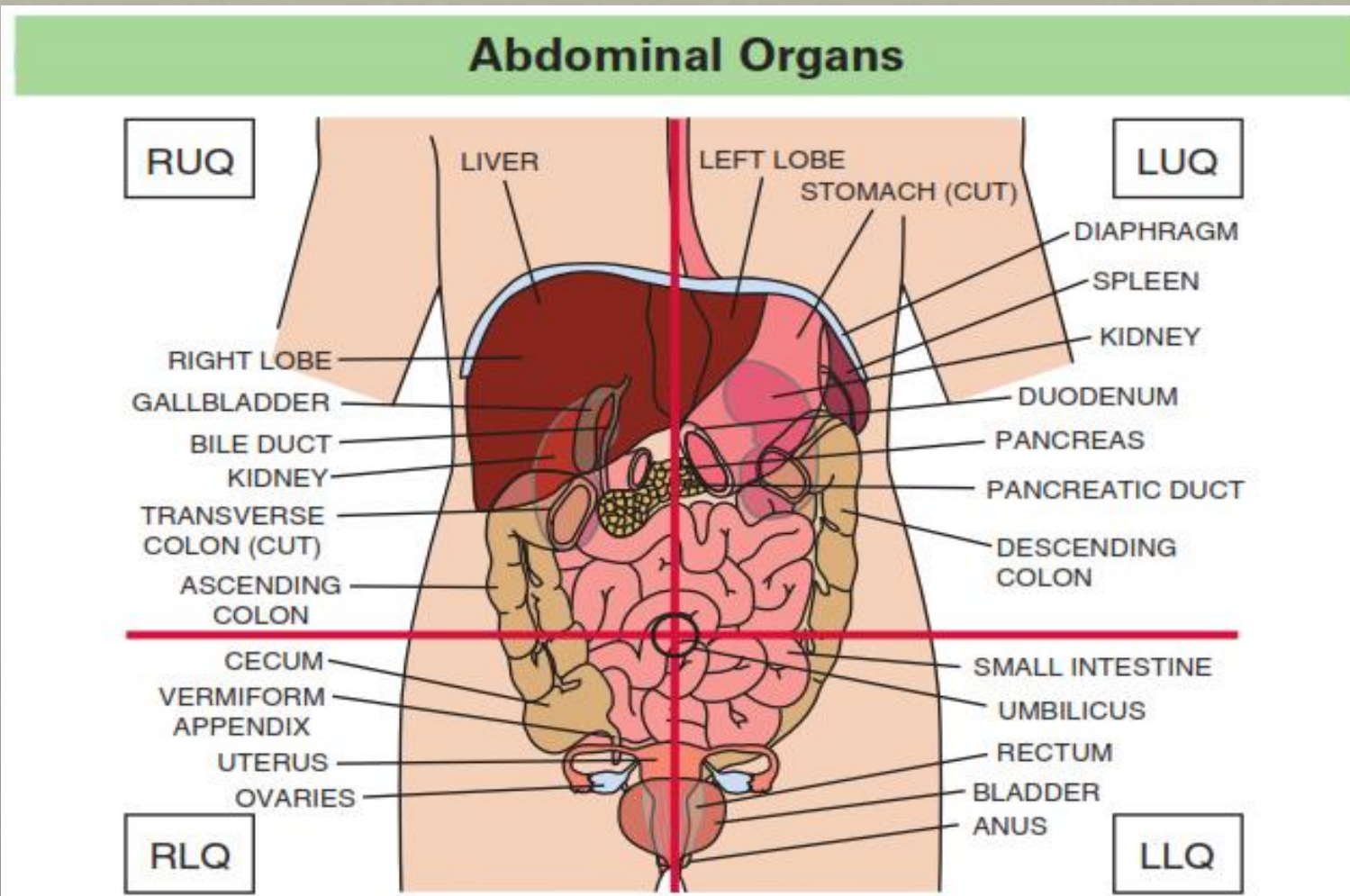
Why We Palpate 4 Quadrants of Abdomen

Big
Concerns

RUQ – Liver

LUQ - Spleen

RLQ
Appendix



Palpating Abdomen (review)

- To begin with use belly button (naval) as center point to define quadrants
- Uniform, steady, strong push of abdomen, using four fingers held flat, in each of four quadrants
- Don't jab; feel with equal force to try to determine if there is a different feel in any of the quadrants
- Big concerns: Injury/illness of liver or spleen, infected appendix, infection of/in peritoneum, ectopic pregnancy, obstructed bowels

Palpating Abdomen

What are you feeling for?

- Different feel or pain response in any of the quadrants
- Focalized pain – pain in one area, not a good sign (versus diffuse pain, not as worrisome)
- Rigidity – a sign the peritoneal cavity (sack containing abdomen) may be swollen
- Guarding – patient tenses up as you get near abdomen, indicating significant pain
- Re-bound tenderness – pain is greater as pressure released, may indicate infection of peritoneum lining or appendicitis

Open Injuries - What to Do

Open Wound - Cover with clean (as possible) dressing

Protruding Contents – Cover with moist dressing

Impaled Object - Leave in place



Closed Injuries

Signs & Symptoms

- Mechanism of injury
- Evidence of swelling, abrasions, or bruising
- Pain or tenderness
- Increasing heart and respiratory rate, decreasing mental status
- Bloody urine or stool
- Fever (well after injury)



Closed Injuries – What to Do

- Observe and record vitals, repeat physical exam to look for changes
- Monitor for shock; treat if symptoms observed
- Depending on MOI and patient condition start early planning on evacuation



Abdominal Pain & Illness

- Again, a black box, difficult to diagnose even in the hospital
- In the end the big picture is stay put, evacuate, or emergency evacuation
- Even if diagnosis is difficult, treatment (supportive care) largely the same
- Differentiate between benign (stay on mission) or “red flag” (evacuate) illness
- Assumption that abdominal illnesses will basically be a problem only over extended timeframes

Abdominal Pain & Illness

Most Common Issues

- **Diarrhea**

- Keep patient hydrated
- Use good hygiene
- Imodium if work necessary
- Serious if blood in stool or patient can't keep up with fluid loss

- **Constipation**

- Keep patient hydrated
- Exercise
- Laxatives

- **Kidney Stones**

- Extremely painful
- Pain comes in waves
- Pain often starts on flanks
- Patient can't find position of comfort
- Eventually stone will pass

- **Urinary Tract Infection**

- Common, especially in women
- Pain or itchiness; frequent urination
- Keep patient hydrated
- Dry cotton underwear may help

Abdominal Pain & Illness

Red Flag Issues

- **Ectopic Pregnancy**

- A pregnancy that occurs outside the uterus, the fetus will not survive
- When the fetus dies it can lead to massive bleeding, shock, and even death
- Any abdominal pain in woman of reproductive age is ectopic pregnancy until proven otherwise
- Sharp pain lower abdomen

- **Appendicitis**

- Pain that starts central abdomen and radiates to patient's lower right quadrant
- Pain that worsens with jarring movements - Nausea and/or vomiting
- Loss of appetite

- **Bowel Obstruction**

- General lower stomach pain - Constipation - Lack of bowel or stomach sounds

- Fever with abdominal pain, guarding, rebound pain, focal (as opposed to diffuse) pain, rigid abdomen

Injuries

When to evacuate

- Red flag, worsening or unrelenting abdominal pain
- Open abdominal injuries
- Closed abdominal injuries
 - High energy MOI
 - Evidence of abdominal wall injury
- Focal pain, guarding, rigidity, re-bound tenderness
- Bloody urine or stool
- Fever

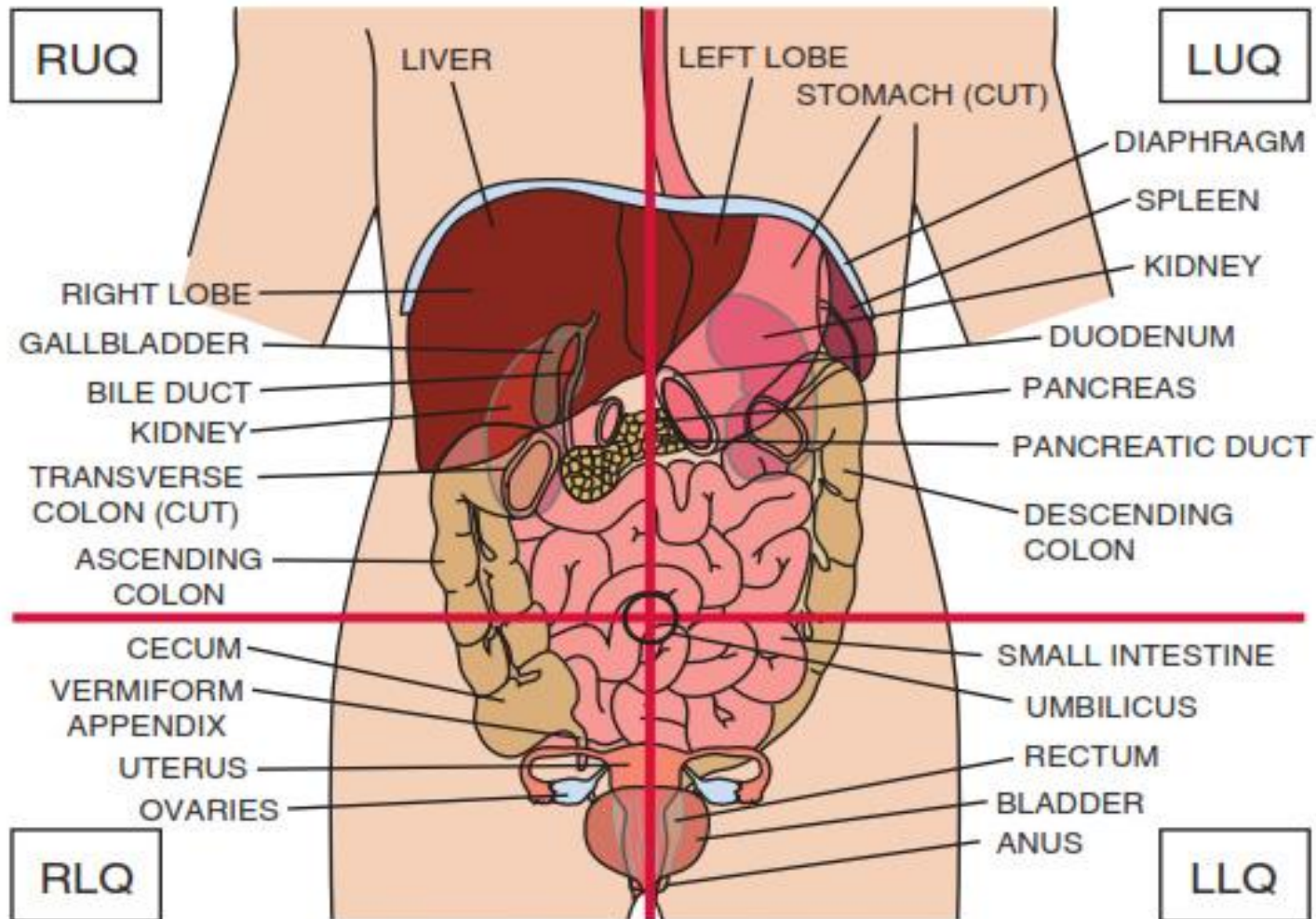
Abdominal Illnesses

When to evacuate

- Not able to tolerate oral rehydration
- Diarrhea and/or vomiting for extended time period (more than several days)
- Pregnancy with abdominal pain

Review: Abdominal Anatomy Quadrants

Abdominal Organs



Summary

Abdominal Issues

- Abdominal issues tough to diagnose; but treatment largely supportive care. Big question is evacuation or not
- Closed injuries – big worry is internal bleeding and/or infection. Look at MOI and for significant pain, swelling, bruising, signs of shock
- Open injuries – if injury punctures peritoneal lining evacuate. Cover penetrating injury with clean dressing
- Abdominal illness – differentiate between benign and red flag pain
- Evacuate for abdominal pain from significant MOI, red flag pain, peritoneal injuries, pain with pregnancy, blood in stool or urine, fever

Research & Resources – Abdominal issues

- Diagnostic Errors Related to Acute Abdominal Pain in the Emergency Department. L. Medford-Davis, E. Park, G. Shlamovitz, J. Suliburk, A.N.D. Meyer, & H. Singh. *Emergency Medical Journal*. 2016 33(4) 253-259.
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