

EM Basic- Abdominal Pain (NOT female specific)

(This document doesn't reflect the views or opinions of the Department of Defense, the US Army or the SAUSHEC EM residency, © 2011 EM Basic, Steve Carroll DO. May freely distribute with proper attribution)

History

Look at the triage note and vitals and address them

Before talking the patient- look at them as they sit on the stretcher

Appendicitis- usually want to remain very still

Kidney stones- usually writhing, can't get comfortable

OPQRST questions about pain

Onset, Provocation, Quality, Radiation, Severity, and Time

Associated signs and symptoms

Nausea/vomiting/diarrhea, back pain, urinary symptoms

Female patients

Missed periods, vaginal bleeding, discharge

PO intake

Relation of pain to food intake, worse pain with movement?

Medical history

Special attention to surgical history, previous colonoscopy

Exam

Don't dive for the abdomen- do an HEENT exam, heart/lung exam

Uncover the abdomen and ask patient to point where it hurts the most

Check bowel sounds first

Can press down with stethoscope to see if they are tender

Start pressing opposite of where they have pain

Start lightly and presser harder

If they have trouble relaxing, bend knees to 45 degrees

Peritoneal signs- usually indicate appendicitis or other surgical pathology

Lightly shake stretcher- for kids- have them jump up and down

All of these signs are positive if increased pain in RLQ

Psoas sign- roll onto left side, extend leg back

Obturator sign- flex and externally rotate right leg

Rovsing's sign- push in LLQ, pain in RLQ

Reverse Rovsing's- push in RLQ, pain in LLQ (diverticulitis)

Murphy's sign- patient takes a deep breath, push in RUQ, positive if patient stops inhaling due to pain

PEARL- Do a testicular exam in all males- don't miss a torsion!

Labs- not everyone needs them but if you think it's surgical abdominal pain, get them (reasons for getting them in parentheses)

UA/HCG for females (no culture unless you admit or treat for UTI)

CBC (consultants want them, up to 30% of appys have normal WBC)

Chem 10 (hypokalemia can cause an ileus, low bicarb= acidosis, creatinine for a CT)

Coags (standard pre-op lab, liver disease elevates coags before LFTs)

LFTs (cholecystitis workups, may not need them for an appy)

Lipase (pancreatitis, amylase is unnecessary- not sensitive or specific)

VBG with lactate (for older patients, high lactate = bad disease)

Pain control- don't withhold it! Morphine 0.1mg/kg IV, most start with 4-6mg IV though. Write PRNs if you can. Give Zofran 8mg IV to counteract nausea/vomiting. Benadryl 25mg IV PRN for itching

PEARL- Demerol is a poor choice of opiate to use. It has lots of side effects and causes lots of euphoria. It doesn't cause clinically significant sphincter of oddi spasm- that is a myth, there's really no reason to use it all. Morphine, fentanyl and dilaudid are all excellent painkillers

Give IV fluids- younger people 1-2 liters, older patients- 500cc at a time

Differential Diagnosis

Appendicitis

Cholecystitis

Pancreatitis

Diverticulitis

Bowel obstruction

Bowel perforation

Mesenteric ischemia

Kidney stone

Gastritis

Gastroenteritis

AAA

How to image the abdomen effectively by quadrants (female specific causes excluded!) (CT A/P= CT abdomen and pelvis)

LUQ abdominal pain- rarely requires imaging unless you have a rigid abdomen or suspect a bowel obstruction

Epigastric- rarely requires imaging. May get it for pancreatitis to check for pseudocyst but probably doesn't need it in the ED. If you find pancreatitis, check a RUQ US for gallstone pancreatitis

RUQ pain- RUQ US is the best test for cholecystitis

RLQ pain- CT A/P for appendicitis. Can be done without contrast with same results, some institutions require PO and/or IV contrast

Suprapubic- in isolation- usually a UTI

LLQ pain- CT A/P for diverticulitis, once again +/- IV and or PO contrast

Flank pain- CT A/P without contrast for kidney stones, CVA tenderness
PEARL: 20-30% of patients with stones have NO hematuria on UA

BIG PEARL: Don't write gastritis or gastroenteritis on a chart, better to say "abdominal pain" or "vomiting/diarrhea" as a diagnosis instead.

BIG PEARL: For gastroenteritis- you need vomiting AND diarrhea. It can't be gastroenteritis unless you have both

Other serious diagnoses:

Mesenteric ischemia- clot thrown into mesentery or low flow state, Classically an older patient with a-fib with pain out of proportion (patient in lots of pain but not tender on exam). Low flow mesenteric ischemia is usually a hypotensive patient on pressors in the ICU. Diagnosed with CT angiogram A/P. Need emergent surgery and/or interventional radiology

Bowel obstruction- patient with multiple abdominal surgeries, diffuse abdominal pain and vomiting as their chief complaint. Diagnosed with CT A/P, PO contrast is helpful

Bowel perforation- usually from a perforated ulcer or recent colonoscopy- be concerned if they have a rigid abdomen. Upright Chest x-ray can be helpful if you see free air, need the OR emergently

AAA- back pain, abdominal pain, syncope, hematuria among other presentations, elderly patient with HTN, use ultrasound to diagnose at bedside- over 5cm needs the OR immediately, 2-5cm needs followup

PEARL- mortality for STEMI?- 8% mortality for elderly patient with abdominal pain? 10%

PEARL- if your CT or US is negative but the patient still has a concerning abdominal exam, get a surgical consult- nothing is 100%

Discharge instructions for abdominal pain

Document a repeat abdominal exam before discharge
Sample discharge conversation with the patient:

I think you have a GI bug. These usually get better on their own but we can make you feel better with zofran so that you can keep fluids down. However, I have been fooled before and sometimes early appendicitis presents like a GI bug. So if you go home and have increased pain, if you are vomiting constantly despite the zofran, if you develop new pain or it moves to your right lower abdomen, or if anything else is concerning you, please come back into the ER. Also, if you don't feel better in 12-24 hours, you should come back in as well.

PEARL- don't discharge your patients with an excessive number of antiemetics. If they are taking zofran or Phenergan every 6 hours and they aren't better they need to come back to the ED, 5 tablets or ODTs is usually sufficient

(Contact: steve@embasic.org)