A Partial Triad: an Unusual Case of Right Upper Quadrant Pain
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Abstract
Doctors rely on patterns of symptoms to diagnose complex conditions. The phrase “right upper quadrant (RUQ) pain” clues doctors to work up gallbladder disorders as part of a wide differential. With 300,000 cholecystectomies performed in the United States each year, working up gallbladder conditions should be a practiced skill for all physicians. The following case demonstrates how an atypical patient presentation required deviation from straightforward “buzzword” recognition to find a unique final combination of diagnoses.

Patient Presentation
A pleasant 22-year-old female presented to the emergency department with complaints of abdominal pain located in her RUQ for 10 days. She described the pain as dull, achy and episodic and admitted to associated with decrease of appetite, nausea, vomiting, and diarrhea, which have all gotten worse over the past 2 days. She reported subjective fevers and chills as well. Patient had no pertinent past medical, obstetrical or surgical history. No daily medications. Denied alcohol, tobacco or illicit drug use.

Vitals: T:97.7° HR:98 RR:19 BP:106/60 O2: 98%
Ht:160cm Wt: 79.3 kg BMI: 31.0

General: no acute distress, alert
Eyes: sclerae anicteric
Neck: no nuchal rigidity, soft
Oropharynx: dry oral mucosa, no lesions
Heart: RRR without murmurs, rubs or gallops
Lungs: CTAB, no rales or wheezes
GI: abdomen soft with epigastric and RUQ tenderness, bowel sounds present
Neuro: AOx3, no focal neuro deficits
Skin: clammy, no rashes, non-jaundiced

Physical Exam

Studies
Right Upper Quadrant Ultrasound (US)
Ultrasound showed mild biliary duct dilatation with 7mm echogenic structure in common bile duct, likely a small choledocolith.

Endoscopic Retrograde Cholangiopancreatography (ERCP)
ERCP demonstrated an essentially normal common bile duct without filling defects or strictures.

Abdominal Computed Tomography (CT)
Impressions:
1. Nondilated fluid-filled loops of small bowel
2. Non-specific small volume free pelvic fluid
3. Splenomegaly.
4. Mild intrahepatic and extra hepatic ductal dilatation

Patient Progression

Initial Laboratory Workup
CT and ultrasound indicated obstruction of common bile duct via gallstones as the etiology of the patient’s abdominal pain, and surgery was consulted on the case. However, the patient developed tachycardia and high fever (Tmax 103.6°) overnight, meeting sepsis criteria. Patient was given IV fluid bolus and broad-spectrum antibiotics. Throughout her course, even with symptoms of acute infection, patient’s labs showed normal white blood cell count, thrombocytopenia and microcytic anemia, which warranted a hematology consultation before any possible surgical intervention. A peripheral smear showed microcytic anemia with features suggestive of iron-deficiency anemia, thrombocytopenia and a few non-reactive atypical lymphocytes. Viral blood work was done to rule out cytomegalovirus, Epstein-Barr virus, typhus and rickettsia. Patient also had a HIDA scan done to assess biliary function.

Outcome

Symptoms of headache, chills and fever resolved. Patient underwent cholecystectomy after HIDA scan did not visualize the gallbladder after 4 hours, diagnosing her with biliary dyskinesia.

EBV testing came back positive, which was deemed the etiology for the patient’s thrombocytopenia and abnormal white blood cells. The microcytic anemia was diagnosed as iron deficiency anemia.

The patient tolerated surgery and was discharged home in stable condition and with no medication prescriptions other than supplemental iron.

Conclusion
Initially, this patient seemed to have a common bile duct obstruction from a choledocholith, which was supported by multiple imaging modalities. However, after further progression, the case turned out to be much more complex due to unexpected lab values revealing a novel infectious etiology. This case demonstrates the need for clinicians to not only carefully review the patient’s history, physical exam and available objective data but to also carefully analyze how a patient’s presentation and the data correlate or contrast clinically.

References

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