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Recurrent Liver Abscess in a Non-Toxic Patient

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INTRODUCTION

- Pyogenic liver abscesses (PLAs) are caused either by direct spread from peritonitis, biliary tract infection, or via hematogenous seeding from a distant source.
- Most PLAs are polymicrobial, however *Escherichia coli* and *Klebsiella pneumoniae* are the most common offending agents in monomicrobial PLAs.
- Initial presenting symptoms include right upper quadrant pain, fever and other clinical signs of infection.
- We describe a case of asymptomatic spontaneous liver abscess that recurred 10 years after a previously managed and resolved PLA.

CASE DESCRIPTION/METHODS

- A 73-year-old-man with a history of type 2 diabetes mellitus, hypertension, CAD status post CABG and PCI 3 years ago, and abdominal aortic aneurysm status post endovascular aneurysm repair presented with 2 weeks of dark urine.
- After receiving his COVID-19 booster and influenza vaccinations, he developed flu-like symptoms with a self-resolving fever of 101.8°F. He had dark amber urine without dysuria or hematuria. Later, he experienced generalized weakness and decreased oral intake. Outpatient labs showed elevated liver function tests, and he was told to present to the ED.

CASE DESCRIPTION/METHODS

- On arrival, he was afebrile with stable vitals. Physical exam was unremarkable. Laboratory evaluation showed a hemoglobin of 11.7 g/dL, sodium of 133 mEq/L, creatinine of 1.4 mg/dL, aspartate aminotransferase of 117 U/L, alanine aminotransferase of 212 U/L, alkaline phosphatase of 825 U/L, total bilirubin of 4.1 mg/dL, and direct bilirubin of 2.1 mg/dL.
- Triple-phase CT showed a 2.8 cm mass in the right liver lobe with linear enhancement. Ultrasound showed mixed echogenicity measuring 3.6 x 2.9 x 3.3 cm in segment 8 of the liver.
- On further evaluation, patient had an *E. coli* abscess diagnosed 10 years prior, managed with antibiotics and drainage. At that time, the abscess was within the right inferior liver lobe, similar to his current abscess. LFTs downtrended.
- Abscess was aspirated, with culture growing oxidase negative, gram-negative rods, likely *E. coli*.
- Patient completed a course of antibiotics with gram negative and anaerobic coverage.
- Patient was scheduled to undergo colonoscopy as per ID as an outpatient, to rule out colonic bacterial translocation.

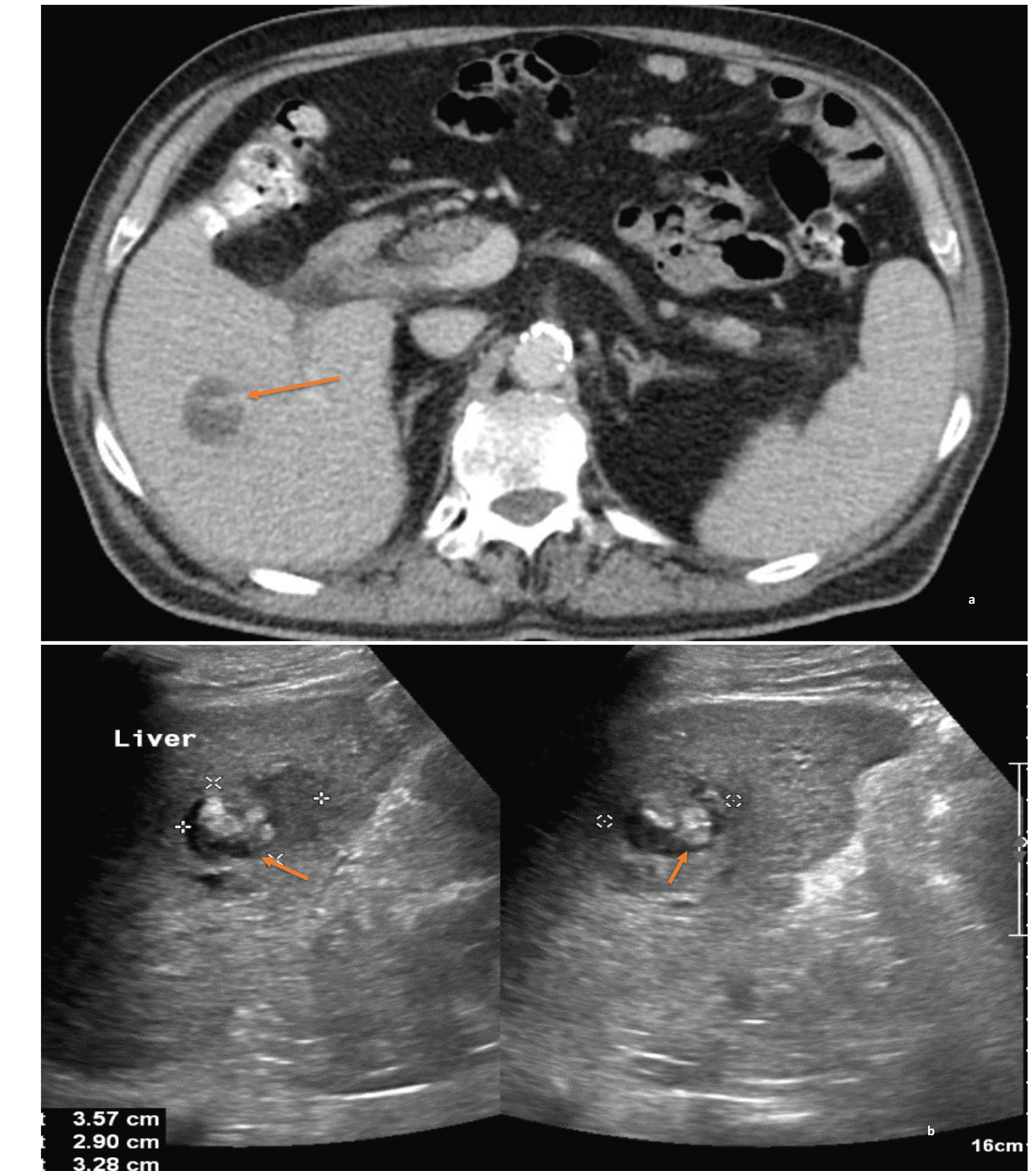

Figure 1 Triple phase CT scan of the abdomen and pelvis in the transverse plane (a) demonstrating a 2.8 cm mass (arrow) in the right lobe of the liver with a small area of linear enhancement. Abdominal ultrasound demonstrating an area of mixed echogenicity (arrows) with areas of increased and decreased sonographic texture measuring 3.6 x 2.9 x 3.3 cm in segment 8 of the liver (b)

CT: computed tomography.

DISCUSSION

- PLAs can result in significant morbidity and mortality due to sepsis and worsening infection.
- Abscess recurrence is very rare.
- Here, we describe a very unusual case of an asymptomatic PLA in a non-toxic patient growing *E. coli*, located in the same location and harboring the same causative organism as an abscess managed 10 years prior in the same patient.