

Imaging Sciences Interesting Cases

CASE 509

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CLINICAL PRESENTATION: Patient is an 84-year-old female with history of flank pain and clinical concern for renal calculus.

IMAGING FINDINGS: See figure legends.



Figure 1: CT image through the upper abdomen demonstrates many low attenuation cysts throughout the liver of different sizes, many of which have calcified walls (red arrows).

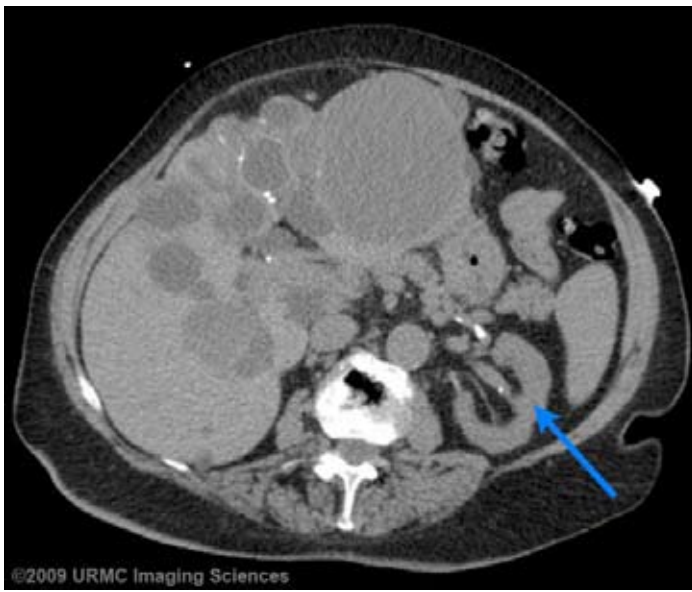


Figure 2: A CT image taken slightly more inferiorly again demonstrates innumerable hepatic cysts. Note that there is no involvement of the kidney (blue arrow).

DIAGNOSIS: Polycystic liver disease

DISCUSSION: Polycystic liver disease is a rare autosomal dominant disorder often found in association with renal polycystic disease. Although hepatic cysts are found in 40% of cases of autosomal dominant polycystic disease involving the kidneys, they may also be seen without renal involvement. The condition is usually asymptomatic and results in liver dysfunction only sporadically, although advanced disease can result in hepatomegaly, liver failure, or Budd-Chiari syndrome. Percutaneous alcohol ablation can be used as an alternative to resection or transplantation in severe cases.

Polycystic liver disease typically appears as multiple to innumerable homogeneous and hypoattenuating cystic lesions with a regular outline on non-enhanced CT scans with no wall or content enhancement on contrast-enhanced images. Cyst contents are often greater than water density due to hemorrhage, or less commonly infection. Calcification of cyst walls is often seen due to old hemorrhage. The cysts neither communicate with each other nor with the biliary tree. Although the diagnosis of polycystic liver disease is

easily made with both CT and MR imaging, MR imaging is more sensitive for the detection of complicated cysts.

REFERENCES:

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2. Qian Q, Li A, King BF, Kamath PS, et al. Clinical profile of autosomal dominant polycystic liver disease. *Hepatology*. 2003 Jan;37(1):164-71. PMID: 12500201 [PubMed]