

Calcified splenic cyst

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Section: Abdominal imaging

Imaging Technique: Ultrasound

Imaging Technique: CT

Case Type: Clinical Cases

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Patient: 33 years, male

Clinical History:

Incidental finding of curvilinear calcification in left upper quadrant of the abdomen.

Imaging Findings:

The patient was brought to the emergency department following a road accident. Because of back pain a plain x-ray examination of the spine was performed which revealed incidentally a 10cm x 15cm curvilinear calcification in the left upper quadrant of the abdomen (Fig 1a). At ultrasound this was thought to be a calcified renal cyst (Fig 2) and, as the measured serum creatinine was also a little raised at 132mM/l, the patient was referred for further investigation. An intravenous urography was performed, which showed normal nephrograms and pyelograms (Fig 1b). Whilst in the department an abdominal CT without further contrast was performed, which showed a 10cm x 10cm cyst with a calcified wall lying anteriorly in the spleen. There was no other intra-abdominal pathology (Fig 3). At follow-up a repeat serum creatinine test was normal, and a serological test for Echinococcus was negative. On questioning the patient denied any previous trauma and had no history of abdominal symptoms.

Discussion:

Splenic cysts are uncommon and are often found incidentally. They can be classified into three main categories. The most common are not true cysts, but pseudocysts - lacking an epithelial lining - and account for about 80% of splenic cysts. They arise as an end stage of old trauma, infection or infarction and may have internal septa or trabeculation. The second most common type are epidermoid cysts. These are true cysts with an epithelial lining and are congenital. The third type are hydatid cysts. These are formed by the larval stage of the dog tapeworm Echinococcus granulosus. The cysts are slow growing and may have internal sediment and membranes. Hydatid cysts develop primarily in the liver and lungs and the spleen may become secondarily involved. Primary splenic hydatid disease is rare. All types of cyst can develop wall calcification and may contain septa or sediment. Therefore it can be impossible to distinguish radiologically between the different types. In this patient a hydatid cyst is ruled out by the negative serology. Despite the negative history, a pseudocyst remains the most likely diagnosis due to its high frequency, with an epidermoid cyst as a second choice.

Ultrasound and CT are the best imaging modalities for assessing splenic cysts, with both able to localise and characterise the nature of the cyst. Ultrasound is, however, more dependent on operator skill and the condition of the patient, and, as in this case, it may be difficult to distinguish a splenic cyst from a renal one.

Differential Diagnosis List: Calcified splenic cyst

Final Diagnosis: Calcified splenic cyst

References:

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Figure 1

a



Description: Pre-contrast image showing a 10cm x 15cm curvilinear calcification in the left upper quadrant of the abdomen. Renal shadows appear normal. **Origin:**

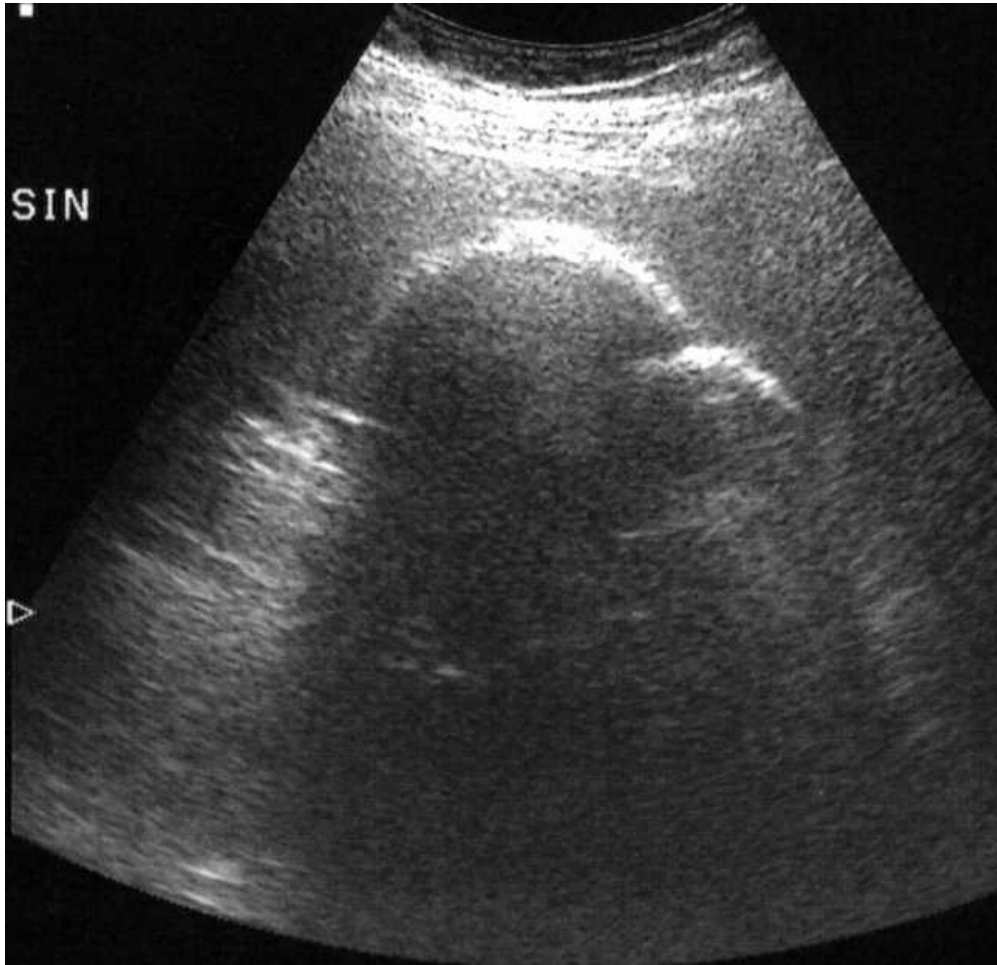
b



Description: 5 minutes post contrast. Normal pyelograms on both sides, with no evidence of distortion or obstruction on the left side. **Origin:**

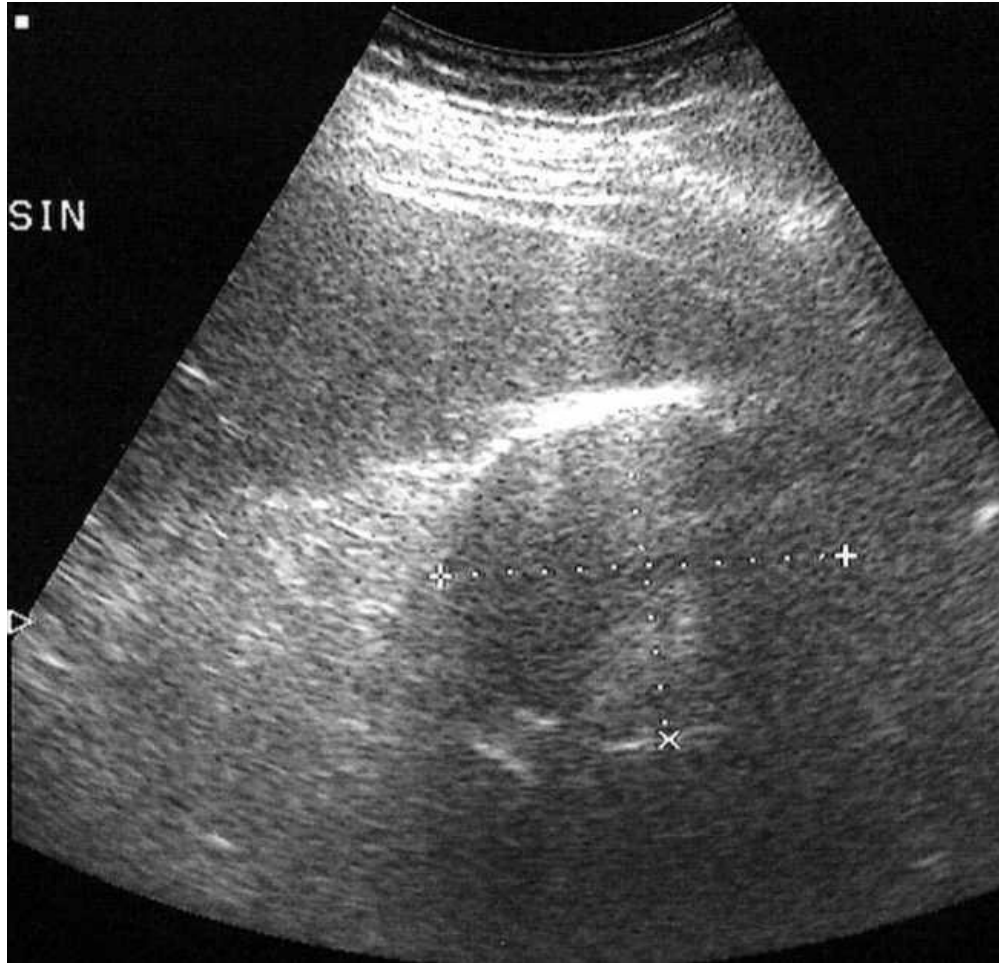
Figure 2

a



Description: Longitudinal view in the right upper quadrant showing a large anechoic mass with a strongly reflective wall indicating calcification. **Origin:**

b



Description: Transverse view of the cyst, which is seen separate from the left lobe of the liver. **Origin:**



Description: Transverse view of the left kidney, which measures 12cm. **Origin:**

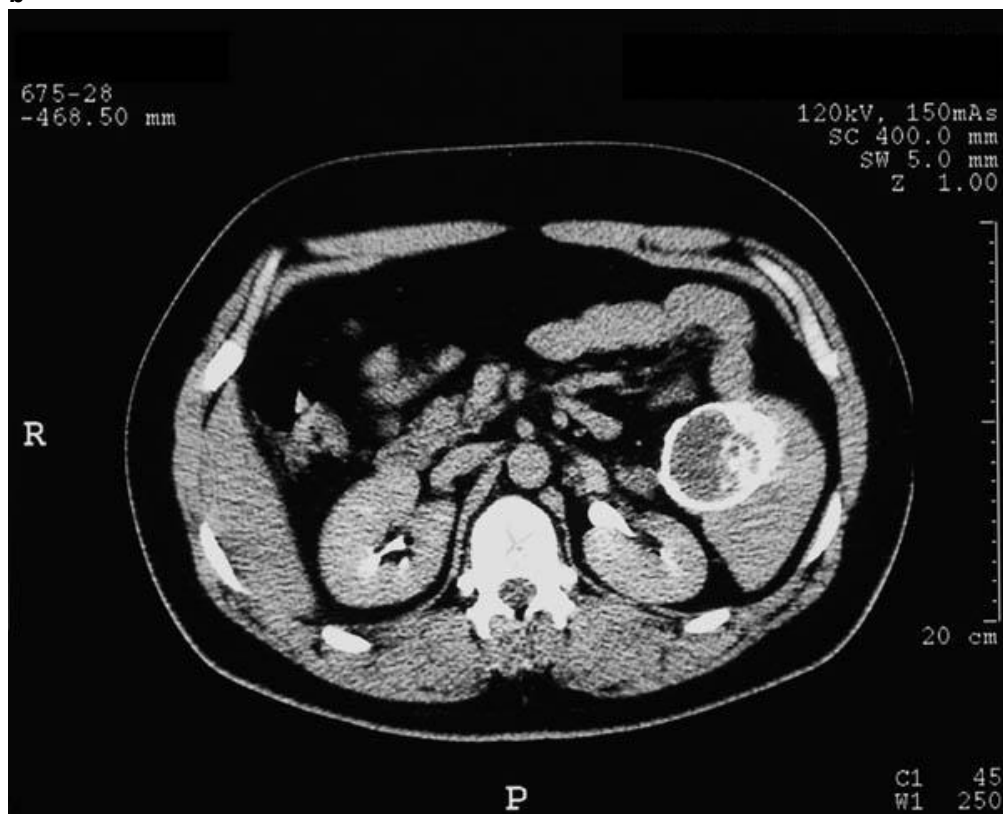
Figure 3

a



Description: Showing a 10cm x 10cm cyst anterior in the spleen with homogenous interior and calcified wall. There is still contrast in the renal pelvis from the IVU injection. **Origin:**

b



Description: A lower slice than Fig. 3a, showing thicker wall calcification plus some internal calcification. **Origin:**