

GIANT ABDOMINAL CYSTIC TEXTILOMA MIMICKING HYDATID CYST

Slim Jouini, MD; Ronald Gourdie, FRCS; Kamal Ayadi, MD;
Mohamed Suleiman, MS; Eze Wachuku, FCAP

It is very unusual to forget a surgical sponge in an operative wound, but the consequences are severe. Traditionally, textiloma produces a reticulated, textiform mass of mixed pattern, the appearance of which is highly suggestive on both plain abdomen radiograph and computerized tomography (CT) scan.¹⁻³

We report an atypical case of giant abdominal cystic textiloma mimicking a hydatid cyst arising from the spleen with spontaneous rupture into the stomach.

Case Report

A 40-year-old male patient was referred to the surgical clinic of King Khalid Military City Hospital with complaints of epigastric swelling and pain of three years' duration, without fever. On inquiry, no other symptoms were noted, but the patient reported a past history of surgical operation for a road traffic accident 9 years previously. Clinical examination revealed a large firm abdominal mass extending from the left to the right hypochondrium. Its lower margin was well-circumscribed, but its upper margin could not be felt. A right upper abdominal paramedian laparotomy scar was noted. Biological tests were unremarkable. Plain abdominal radiographs showed an opacity in the epigastrium and left hypochondrium, displacing the gastric bubble and bowel gas. Ultrasound of the abdomen revealed a huge cyst in the left upper quadrant, measuring 25 cm in its long axis. The cyst was in close contact with the inner surface of the spleen, which showed multiple large calcifications with marked posterior acoustic shadowing (Figure 1). The cyst demonstrated multiple tiny mobile low-level echoes, with the presence of dependent hyperechoic serpiginous structures. These features were suggestive of hydatid cyst of the abdomen complicated by membrane detachment (type 2 of Gharbi).⁴ Ultrasound could not confirm the organ of origin of the cyst. Abdominal CT scan with oral and

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FIGURE 1. Abdominal ultrasound: transverse scan of the epigastrium and left hypochondrium. The cyst looks in close contact with the inner surface of the spleen that shows multiple large calcifications with marked posterior acoustic shadowing. Note the presence of multiple tiny mobile low-level echoes within the cyst.

FIGURE 2. Abdominal CT scan: well-defined encapsulated, non-enhancing cystic mass of the left upper abdominal quadrant. The stomach, aorta and inferior vena cava are pushed to the right side. Note the presence of dependent hyperattenuated serpiginous structures (arrowhead) within the cyst.

intravenous contrast enhancement disclosed a well-defined encapsulated, non-enhancing cystic mass in the left upper quadrant. The liver, pancreas, stomach and great vessels

FIGURE 3. MRI of the abdomen: sagittal T-weighted image of the left hypochondrium. The cyst shows a close relationship to the anterior surface of the spleen (black circle), which looks displaced downwards. The left diaphragmatic cupola is pushed upwards, whereas the left kidney (arrowhead) is displaced downwards. No intracystic formation is seen.

FIGURE 4. Plain abdominal radiograph: large air-fluid level in the left hypochondrium is suggestive of rupture of the known cyst into the gastrointestinal tract.

had been pushed to the right. Inside the cyst, dependent hyperattenuated serpiginous structures were noted (Figure 2). CT scan could not determine whether the mass arose from the spleen, the left lobe of the liver or the peritoneum. Magnetic resonance imaging (MRI) of the abdomen was done in transverse, sagittal and coronal planes by using SE T₁-weighted sequences in order to detail the location and extent of this mass. On MRI, the lesion appeared isointense to the spleen, suggesting a thick content. Coronal and transverse cuts demonstrated that the cyst was independent of the liver. On sagittal cuts, the mass showed a close relation to the anterior surface of the spleen that was displaced downwards (Figure 3). No intracystic formation was identified on MRI. Although the serological agglutination test for echinococcosis was negative, the radiological picture was suggestive of a huge abdominal

From the Departments of Medical Imaging, Surgery and Pathology, King Khalid Military City Hospital, Hafar Al Batin, Saudi Arabia.

Address reprint requests and correspondence to Dr. Jouini: Department of Medical Imaging, King Khalid Military City Hospital, P.O. Box 10018, Hafar Al Batin 31991, Saudi Arabia.

hydatid cyst with detached membrane, probably arising from the spleen.

The patient was lost to follow-up and was admitted from the emergency room 8 months later for a sudden attack of epigastric pain and vomiting of blackish fluid. On examination, the patient was pale but afebrile. Palpation showed epigastric tenderness with no rigidity. Vital signs were normal. Plain abdominal radiograph exhibited a large air-fluid level in the left hypochondrium (Figure 4). Ultrasound and CT scan were done on an emergency basis, and demonstrated reduction in size of the known huge abdominal cyst with an irregular air-fluid level in its substance. Fluid collection was noted in the perisplenic region. These features were strongly suggestive of rupture of the known cyst into the stomach. A Gastrografin meal done via nasogastric tube demonstrated extragastric leak of contrast, confirming the gastrocystic fistula.

Surgical operation disclosed a large peritoneal cystic mass in contact with the spleen and having eroded the posterior wall of the stomach. This cyst had a thick inflammatory wall and contained a blackish fluid as well as a neglected surgical towel in a process of disintegration. Pathological study of the cyst wall revealed fibro-fatty tissue and organizing blood clots containing fibers of synthetic material surrounded by numerous macrophages and foreign body giant cells.

Discussion

An abdominal textiloma is a retained surgical sponge left after a surgical operation. Clinically, it may lead to abdominal pain, intestinal obstruction, digestive tract fistula or inflammatory tumor formation. Sometimes, textiloma is asymptomatic, discovered fortuitously during an imaging study done for another reason.^{1,2} In most cases, it manifests radiologically as a reticulated mass of mixed pattern located in the inframesocolonic region. However, well-encapsulated pseudocystic forms with peripheral calcifications, mimicking mesenteric cysts, have been described.^{3,5}

Our observations are remarkable owing to the huge size of the pseudocyst, leading to spontaneous rupture into the stomach and the location in the left subphrenic space raising a number of differential diagnoses, including: 1) a cyst of the left lobe of the liver, ruled out by MRI multiplanar study; 2) exophytic cystic formation of the spleen of various origins (hydatid, epidermoid post-traumatic pseudocyst) suggested by the tight relationship of the mass to the anterior and medial surfaces of the spleen with no cleavage area seen on all imaging modalities; 3) either mucinous cystadenoma or pseudocyst of the tail of the pancreas, both of which were unlikely because the pancreas appeared separated from the cyst and pushed anteriorly and laterally to the right side; 4) mesenteric cyst, which was suggested by the large size of the cyst, presence of peripheral calcifications and displacement of all

abdominal organs; and 5) retroperitoneal cyst, which was suggested by the forward displacement of the pancreatic tail and the downward displacement of the left kidney. However, the backward displacement of the spleen did not support this diagnosis. Another interesting aspect of the case was the presence inside the pseudocyst of dependent serpiginous linear formations, suggestive of hydatid cyst with detached membrane (type 2 of Gharbi).⁴ In this type, the larval cystic form of the tapeworm *Echinococcus granulosus* shows partial or complete detachment of the parasitic membranes into the hydatid fluid due to pericyst ischemia. This sonographic appearance has also been described by Niron and Ozer as the "waterlily sign."⁶ Negativity of the hydatid serological test cannot rule out the diagnosis. To our knowledge, these mobile serpiginous structures, corresponding to synthetic material, have never been described on ultrasound and CT scan within an abdominal cystic textiloma. Matsuki et al.⁷ recently reported a case of folded fabric appearance within a retroperitoneal cystic textiloma, seen only on T₂-weighted

MRI but not identified on sonography, CT scan and T₁-weighted MRI. In patients with a history of prior surgery, granuloma secondary to retained surgical pack should be considered as a cause of cystic abdominal mass containing dependent serpentine formations.

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