

Pseudoascites: unusual presentation of omental cyst

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Abstract. An unusual case of omental cyst is described. The child initially presented with a unilocular intraperitoneal fluid collection on CT. After paracentesis, CT showed freely layering peritoneal fluid, with eventual complete resolution of fluid. CT eight months later demonstrated re-appearance of a multi-septated cystic mass. At surgery, an omental cyst was found.

Case report

A 26-month-old male was noted at routine examination to have a large, protuberant abdomen. The child's mother felt that the abdomen had always been large, and did not feel that there had been a sudden change in the abdominal girth. The physical examination was unremarkable, except for a soft, protuberant, non-tender abdomen.

Abdominal CT scan revealed a large collection of intraperitoneal fluid, extending from

liver edge into the pelvis (Fig. 1). The fluid did not have imaging characteristics typical of ascites; specifically, the fluid did not layer dependently and did not disperse around the liver and spleen. There were no identifiable solid components or septations within the fluid collection. Subsequently, paracentesis was performed and revealed exudative fluid without microbial growth or neoplastic cells. Laboratory results were unremarkable.

Upon referral to our institution several weeks following paracentesis, a repeat abdominal CT scan revealed fluid collections in both paracolic gutters, significantly smaller than on the initial CT scan, which layered dependently in the prone position, indicating free intraperitoneal fluid. On the basis of these findings, a diagnosis of ascites was made. The child remained asymptomatic, and a follow-up CT scan two months later was normal with complete resolution of the peritoneal fluid. The child remained well until eight months later, when he presented with increasing abdominal distention. CT (Fig. 2) and ultrasound performed at this time revealed reaccumulation of the fluid collection,

which now occupied most of the mid-abdomen and pelvis and contained numerous internal septations, demonstrated most dramatically on ultrasound. Exploratory laparotomy was performed, revealing a 17 × 11 × 8 cm sac-like cystic structure, one surface of which was attached to a thin layer of omentum. The cyst contained numerous fibrous strands as well as brown-green fluid and semi-solid material. Histologic examination revealed chronic inflammatory cells, lipid laden macrophages, and no evidence of malignancy. Pathologic diagnosis was omental cyst with chronic inflammation. The child made an uneventful recovery.

Discussion

The case reported here is of interest because it illustrates a distinctly unusual radiographic presentation of omental cyst, as well as several potential pitfalls in the radiologic diagnosis. The lesion initially appeared as a large, loculated fluid collection occupying a major portion of the peritoneal cavity. After paracentesis, the mass was decompressed, presumably through a small rent created by the paracentesis needle. The contents of the cyst were evacuated into the peritoneal cavity, explaining the appearance of freely layering ascites on the second CT scan. Subsequently, the cyst fluid was completely resorbed through the peritoneal lining, only to reaccumulate within a complex cystic mass as seen on the final CT scan and ultrasound. Thus, when the patient with a large mesenteric or omental cyst is imaged after paracentesis, a mistaken diagnosis of ascites might be made, and the origin of the peritoneal fluid from a cystic mass overlooked. In-

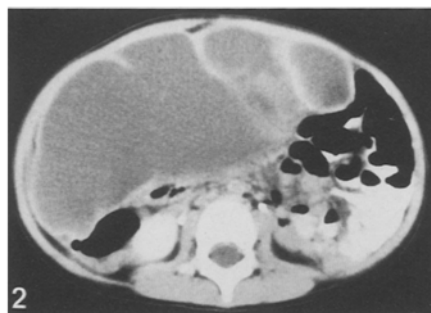


Fig. 1. CT section through mid-abdomen demonstrates a large intraperitoneal fluid collection, which appears to displace bowel centrally. The fluid did not layer dependently in the pelvic cul-du-sac, and did not disperse around liver and spleen

Fig. 2. CT scan eight months later demonstrates development of a septated, loculated fluid collection occupying most of the mid-abdomen and pelvis

deed, imaging after paracentesis may be normal if the cyst contents have been resorbed through the peritoneum.

Mesenteric and omental cysts are uncommon lesions which most often present as an enlarging, painless mass. When complicated by hemorrhage, infection, or torsion, they may be mistaken for acute appendicitis, Meckel's diverticulitis, or ovarian torsion [1]. Bowel obstruction or hydronephrosis may occur secondary to extrinsic compression of bowel or ureter by the mass. Malignant degeneration is rare, usually to a low grade sarcoma [2].

The typical imaging characteristics of mesenteric and omental cysts are those of a well defined, cystic mass exhibiting acoustic enhancement on ultrasound [3].

This was the initial appearance of the mass in our patient. Less commonly, these lesions may appear as complex, multiseptate cystic masses with variable solid components giving a "honeycomb" appearance on ultrasound [4]. This corresponds to the appearance of the mass in our patient after reaccumulation of fluid within the mass following paracentesis.

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