

Giant Ovarian Cyst Mimicking Ascites

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A 60-year-old female patient presented to our clinic with complaints of abdominal distention. The rapid accumulation of fluid was originally thought to be ascites, based on ultrasonographic examination. The cause, however, was ultimately determined to be a borderline malignant giant ovarian cyst. Several processes can mimic ascites: bladder distention or diverticulum, hydrone-

phrosis, pancreatic pseudocysts, and large uterine or ovarian tumors. For this reason, clinicians must consider processes other than ascites in the differential diagnosis of large abdominal fluid accumulation.

Key words. Ovarian cysts; ascites; abdomen.
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Ascites is one of the common causes considered in the differential diagnosis of abdominal distention related to the accumulation of a large quantity of fluid. Common causes of transudative ascites are liver cirrhosis and heart failure. Less common reasons are constrictive pericarditis, inferior vena cava or hepatic vein occlusion, and liver neoplasms. When the ascitic fluid is exudative, the differential diagnosis includes tuberculosis, pancreatitis, primary or secondary peritonitis due to bile fluid, pelvic inflammatory disease, ruptured viscus and liver or peritoneal metastases. Other causative origins may include hypothyroidism, endometriosis, collagen diseases, hypoalbuminemia, Meig's syndrome, pseudomyxoma peritonei, and leakage of the cysterna chyli or other lymphatic vessels.¹

Processes mimicking ascites, such as bladder distention, or diverticulum, hydronephrosis, pseudocyst of the pancreas, or large tumors of the ovaries or uterus, must also be considered.²

We describe a patient with a rapid accumulation of fluid originally diagnosed as ascites by ultrasonographic examination, but which ultimately proved to be a borderline malignant giant ovarian cyst.

Case Report

A 60-year-old woman came to our clinic over a period of 4 months with complaints of abdominal distention, poor appetite, weight loss, and constipation that she had been experiencing over the course of a year (Figure 1). Her history was significant only for hypertension, for which she was taking medications. Physical examination revealed cachexia without fever or shortness of breath. Her blood pressure was 170/100 mm Hg, and her pulse rate was 112 beats per minute. No cervical vein congestion was observed, and her heart and breath sounds were normal. Her abdomen was distended and engorged and featured visible superficial veins. A succussion splash and shifting dullness were noted, and there was pedal edema.

Laboratory test results were as follows: hemoglobin 11.1 g/dL (111 g/L) with normal indices; leukocytes, 4380 per mm³ with normal differential count; platelets, 323,000 per mm³; erythrocyte sedimentation rate (ESR), 100 mm in the first hour; urea, 24 mg/dL (8.6 mmol/L); creatinine, 1.0 mg/dL (88 μmol/L); albumin, 3.8 g/dL (38 g/L); bilirubin, 1.6 mg/dL (27 μmol/L). Glutamate aminotransferase, sodium, and potassium were within normal limits. A VRDL was negative. The chest radiograph was normal. An abdominal ultrasonogram revealed a large amount of fluid divided by multiple septa. The omentum appeared to be infiltrated by a neoplastic process. The radiologist's impression was of a malignant ovarian tumor with ascites and peritoneal metastases. The uterus and ovaries were not well visualized.

An abdominal tap revealed a greenish noncoagulable

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Figure 1. The patient as she presented to the clinic.

liquid with an albumin content of 3.1 g/dL (31 g/L). Cytology, culture, and Ziehl-Neelsen smear were negative. A computerized tomography scan performed with intravenous injection of contrast material demonstrated a huge cyst that occupied the abdomen and pelvis and compressed the liver, spleen, and intestines backward and downward (Figure 2).

On laparotomy, an ovarian cyst on the left side was identified. It did not involve other abdominal organs and was completely removed (Figure 3). The cyst was histologically identified as a mucinous cyst of borderline malignancy that contained solid material and daughter cysts. The tumor weighed 22 kg (48.5 lb).

After 3 months of follow-up, the patient was completely asymptomatic. She had gained weight and her physical examination was completely normal.

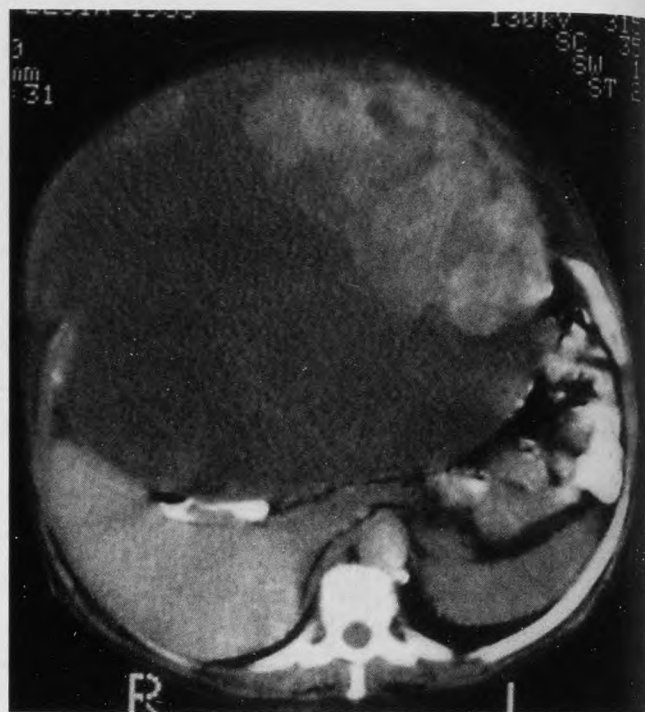


Figure 2. A computerized tomographic scan demonstrating a large nonhomogenous cyst compressing the liver, spleen, and intestine.

Discussion

Abdominal fluid accumulation does not always indicate the presence of ascites. There are reports in the literature of other processes such as hydronephrosis and pancreatic or ovarian cysts that can mimic ascites clinically and on imaging tests.^{3,4} These processes must be considered in the differential diagnosis of large amounts of fluid in the abdominal cavity. Our patient's condition was initially diagnosed as ascites but later determined to be fluid in a giant ovarian cyst.



Figure 3. The 22-kg (48.5 lb) ovarian cyst removed at operation.

The most remarkable descriptions of large ovarian cysts are those of Spohn, who in 1922 reported one that weighed 148.6 kg (328 lb), and of Symmonds, who in 1963 reported encountering one that weighed 79.4 kg (175 lb).^{5,6} Such descriptions were among the curiosities reported in the 19th and early 20th centuries. They have become rarer as imaging modalities improve and diagnoses are made earlier. Nevertheless, an ovarian cyst of 70 kg (154 lb) was recently reported in a 22-year-old Mexican woman.⁷

In our patient, the cyst caused cachexia. The patient's loss of appetite and weight and the accelerated ESR hinted at the possibility of an inflammatory or neoplastic process. The ESR returned to normal after laparotomy. Based on its high albumin content, the abdominal fluid was judged to be an exudate.

Ovarian cancer comprises approximately 25% of all malignancies of the female genital tract. Epithelial ovarian tumors comprise 60% to 70% of all ovarian neoplasms and about 90% of all malignant ovarian cancers. Unfortunately, ovarian cancer is insidious and "silent" in terms of signs and symptoms. Patients with these conditions might complain about pain or fullness in the pelvis, bloating sensation, gas or other nonspecific complaints that are usually ascribed to some gastrointestinal cause.

It is not unusual for a patient with recently developed ascites to have undergone a thorough but unrevealing gastrointestinal tract workup. Ascites frequently accompanies ovarian cancer. It has been associated with primary and Krukenberg's tumors as well as cancer that has metastasized to the breast, colon, stomach, and uterus. When there is a palpable mass and no ascites, a benign ovarian tumor should be suspected. When there is a pelvic mass and ascites, surgery is indicated with a working diagnosis of ovarian cancer.

Mucinous growths of low malignant potential and mucinous carcinomas account for 10% to 20% of all malignant epithelial tumors of the ovary. They are usually large neoplasms, the average diameter being 16 to 17 cm. The mean age of patients with mucinous tumors is 50 to 55 years.⁸ Aure et al⁹ consider the group with borderline malignancy as having benign disease that comprises approximately 40% of all nonmalignant mucinous tumors.¹⁰

We conclude that a clinician must consider processes other than ascites in the differential diagnosis of large abdominal fluid accumulations.

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