Pseudoascites – Still a Diagnostic Pitfall

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Abdominal distension, bulging flanks, shifting dullness and a palpable fluid wave found on physical examination usually denote the presence of ascites, an abnormal collection of fluid within the peritoneal cavity [1]. While this diagnosis is correct in most cases, occasionally similar signs are observed in patients without free fluid in the peritoneal cavity. In those cases the term pseudoascites is used, indicating that although the physical findings are highly suggestive of ascites, no free fluid is present in the peritoneal cavity.

In this report we describe a patient with a 3 year history of progressive abdominal distension in whom physical findings strongly suggested ascites. Repeated paracenteses yielded hemorrhagic fluid, supporting the diagnosis of malignant ascites. Postmortem examination, however, revealed pseudoascites caused by a giant benign renal cyst. This case illustrates the difficulties in distinguishing true ascites from pseudoascites by clinical means.

Patient Description

A 92 year old man was admitted to the medical service in a moribund state, markedly dehydrated and dyspneic. His family related that 10 years previously a 10 x 10 cm mass was found in the left upper abdomen. Abdominal ultrasound and computerized tomography, barium enema and intravenous pyelogram failed

to delineate the anatomical origin of the mass. Unfortunately these prior imaging studies were not available for review. Repeated aspirations of the mass yielded hemorrhagic fluid with necrotic material. No malignant cells were found. Because of the patient's advanced age, no further diagnostic procedures were carried out at the time. During the ensuing years, he remained active and asymptomatic.

Three years prior to his last admission, he noted gradual enlargement of the abdomen. His family physician diagnosed tense ascites, and again found hemorrhagic fluid on paracentesis. On admission to our department, the outstanding feature on physical examination was massive distension of the abdomen, with bulging flanks and a fluid wave. Abdominal paracentesis was performed, and 2 L of reddish-brown fluid containing necrotic debris without evidence of malignant cells were removed. The following day, the fluid reaccumulated and the abdomen returned to its previous dimensions. Several hours later the patient died.

At postmortem examination, a huge cyst measuring 25 cm in diameter and occupying the entire abdomen was found attached to the left kidney, which was hydronephrotic and very atrophic. The cyst was completely covered by the thin renal capsule and contained 3,000 ml of bloody fluid and clots with necrotic matter. Microscopically, the cyst wall was a thin rim of collagenous tissue without epithelial lining or evidence of malignancy. An unrelated finding, the probable cause of the patient's cachexia, was a bronchogenic carcinoma in the left lung, with metastatic deposits in mediastinal lymph nodes, liver and adrenals.

Comment

Ascites is defined as the presence of an abnormal collection of free fluid within the peritoneal cavity. It is usually possible to diagnose ascites on physical examination, particularly when the quantity of fluid is large, by the presence of abdominal distension, bulging flanks, a palpable fluid wave and shifting dullness [1]. Small amounts of fluid are best detected by abdominal ultrasound. Rarely, patients may present with physical findings highly suggestive of ascites when, in fact, they have no free fluid within the peritoneal cavity. The term pseudoascites is used in such cases. Fiedorek et al. [2] recently reviewed the causes of this condition. It may also be caused by omental and mesenteric cysts that grow to very large proportions and even fill the entire abdominal cavity [3]. Several cases of giant ovarian cysts presenting with pseudoascites have also been reported [4]. Other causes of pseudoascites are intraabdominal ecchinococcal cysts, retroperitoneal cysts, and tubular enteric duplication cysts.

Slowly developing hydronephrosis rarely may cause enlargement of the renal collecting system to proportions sufficient to be mistaken for ascites. The patient described here also had a renal origin of pseudoascites. In retrospect, the abdominal mass noted 10 years previously was a large renal cyst that slowly enlarged to fill the entire abdomen. The hemorrhagic fluid obtained at paracentesis was not bloody ascites, but rather bloody fluid from the cyst cavity. Koyabashi et al. [5] described a benign hemorrhagic renal cyst measuring 18 x 12 x 18 cm that was diagnosed by magnetic resonance imaging of the abdomen and renal arteriography. The patient underwent nephrectomy and the cyst, weighing 1,170 g, contained bloody fluid and necrotic tissue. These findings are very similar to those of the present case, except for the huge size of our patient's cyst.

Fiedorek and colleagues [2] emphasized the difficulty of distinguishing pseudoascites from true ascites by history or physical examination. The possibility of pseudoascites should be entertained, and the correct diagnosis confirmed by abdominal ultrasound or CT.

References

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