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Case Report

Cirrhosis of liver and pelvic mass masquerading as ovarian malignancy

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Introduction

Ovarian cancer usually presents in postmenopausal women with nonspecific abdominal symptoms. When such women are found on ultrasound/MRI/CT scan to have ovarian masses, ascites along with significantly elevated tumor marker serum CA 125, diagnosis of ovarian cancer appears almost certain[1]. The risk scoring system (Risk of Malignancy Index or RMI) is heavily weighted in favor of CA-125. RMI of 200 is usually used as a cut off between benign and malignant ovarian tumor. It is, however, important to realize the nonspecific nature of CA125. It can be raised in both malignant and nonmalignant gynecological as well as nongynecological conditions. Ignoring possibilities other than ovarian malignancy may result in inappropriate and potentially harmful interventions.

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Case report 1

This 59-year-old postmenopausal woman was referred to us by one of our physician colleagues with a provisional diagnosis of ovarian malignancy. She originally presented to him with complaints of weight loss, loss of appetite and abdominal distension of 6 months duration. She was a poorly controlled obese noninsulin dependent diabetic and hypertensive. Biochemical parameters were : CA 125 1265 kAU/L, bilirubin 74μmol, ALT 25 IU/L, ALP 90 IU/L, total proteins 89g with albumin 20g and globulin 69g. An ultrasound scan suggested ovarian malignant disease with peritoneal metastases because of gross ascites and a cystic mass of 6.1 cm in the right iliac fossa. On MRI a multiloculated cystic mass arising from the right side of the pelvis almost certainly within the right ovary with no solid components was observed. Cyst margins were regular. At laparotomy, she was noted to have gross ascites, a smooth surfaced 5cm size right ovarian cyst, a normal left ovary, a normal sized uterus with two small fibroids and cirrhosis of liver. Since there was no suspicion of malignancy of the right ovary and since a cirrhotic liver explained the ascites and raised CA 125, only right oophorectomy was performed. No malignant cells were detected on the cytological examination of the ascitic fluid and the right ovarian cyst was reported as a benign serous ovarian cyst. Following laparotomy, her son confided in us that her alcohol intake was well

in excess of 2 units per day. After a brief stay in the intensive care unit, she went back to the gynecology ward. She suffered from complete dehiscence of the abdominal wound and required resuturing on day 9. She subsequently developed hepatic coma and was transferred to the high dependency unit in the medical ward. Sepsis of the wound and progressive deterioration of liver function followed. She died 3 months after laparotomy.

Case report 2

A 57-year-old postmenopausal woman was referred simultaneously to us and to one of our physician colleagues with a 6 weeks history of abdominal pain and bloating, reduced appetite, and weight loss. The abdominal pain was sharp in nature and generalized. She gave no history of chest pain, cough, hemoptysis, hematemesis or malena. She had a minor nose bleed about a week prior to referral. She was a nonsmoker and drank occasionally. She looked frail, pale and jaundiced, and was normotensive. Spider nevi on the chest and marked ankle edema were noted. She had engorged veins on the abdominal wall besides moderate hepatosplenomegaly and ascites. Her hemoglobin was 11.9 g/dL and platelets 109x109 lac/mL (140-450): macrocytosis was noted. Her serum bilirubin was 149 µmol (0-17), ALP 132 IU/I (40-100), ALT 34IU/L (5-35) and gamma GT 504 (10-46). Hepatitis serology was negative. Coagulation screen was reported as PT 17.7 seconds (11-15), fibrinogen 2.51 g/L (1.5-4.5) and APTT 43 seconds (26-38). An ultrasound scan detected a large lobulated mass arising from the pelvis. The uterus and ovaries were not identified. The liver and spleen were noted to be enlarged with no focal lesion. On CT scan of pelvis and abdomen she was noted to have a mass arising party from the uterus and partly from the ovary. One of the masses in the right of the pelvis demonstrated punctuate calcifications. CA 125 was 1566 kAU/L (0-35). Our physician colleague suspected ovarian malignancy. Because of hepatosplenomegaly and deranged liver function, we suspected either a liver pathology or a dual pathology (ovarian and liver). We exerted caution following our experience with the first patient and decided that a laparoscopy should be carried out first. At laparoscopy she had massive ascites of >5 liters, uterine fibroids, and normal ovaries (Figure 1) with cirrhosis of both lobes of liver (Figure 2).

She was discharged from our care following laparoscopy and was followed up by the physician colleague. At that stage she admitted to

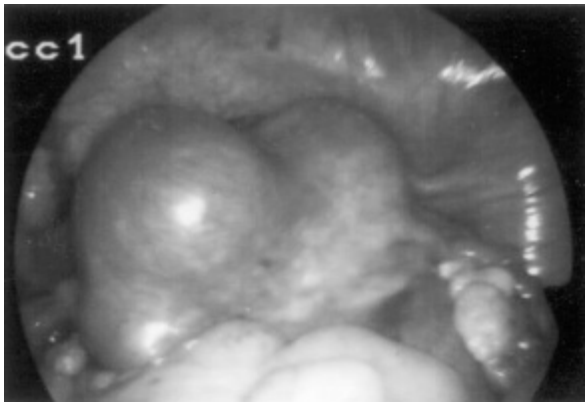

Figure 1. Patient 2. E, Multiple uterine fibroids and normal adnexa.

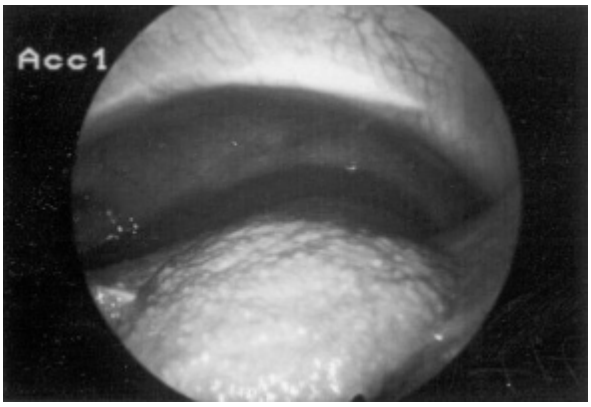

Figure 2. Cirahosis of liver of patient 2.

overindulgence in alcohol. She was commenced on spironolactone and a high protein diet. Her liver function gradually worsened and she became hypoproteinemic. Two months after the laparoscopy, she was admitted to the hospital with a large bout of hematemesis. Her hemoglobin was 6.3g/dL, PT 24.3 and APTT 47.4 seconds. Grade 3 varices in the lower esophagus were noted and were injected with ethanolamine. Hematemesis recurred and a Sengstaken tube was inserted. Supportive care was provided with fresh frozen plasma and red cell transfusions and paracentesis. She aspirated and suffered respiratory arrest 2 days after admission. She was resuscitated, intubated and transferred to Intensive therapy unit. Adult respiratory distress syndrome followed. Despite heavy inotropic support and mechanical ventilation, she developed progressive hypotension and acidosis. She died 3 days after admission in the ITU.

Discussion

CA 125 is a tumor marker secreted by the ovarian epithelial cancer cells, so elevated CA125 levels are used for screening and follow up of ovarian malignancies. CA125 is also secreted by the cells of the endocervix, endometrium, fallopian tubes, peritoneum, pericardium and pleura, and is occasionally expressed by intestines, lungs and kidneys. Not unexpectedly, CA125 is also raised in many nonmalignant gynecological and nongynecological conditions[2-4]. The two present patients with clinical features of ovarian malignancy, very significant elevations of CA125, and imaging studies suggestive of ovarian malignancy turned out to be cases of cirrhosis of liver. In the first patient we proceeded straight to a laparotomy since she was postmenopausal, had gross ascites, markedly raised CA125 and ultrasound and MRI findings suggestive of ovarian malignancy. Unexpectedly it turned out to be a benign ovarian cyst with cirrhosis of the liver. She had a stormy postoperative period with burst abdomen, resuturing of the abdominal wound and liver failure which were iatrogenic and which undoubtedly shortened her life span. Looking back we did not adequately enquire about her alcohol intake and did not take good notice of her subtle abnormality of liver function.

The second patient presented with similar features of ovarian malignancy – postmenopausal state, massively raised CA125, ultrasound and CT scan of pelvis suggestive of ovarian malignancy. Presence of hepatosplenomegaly, abnormal LFTs and our experience with the first case guided us in performing a laparoscopy at the first instance. Cirrhosis of the liver, massive ascites, multiple uterine fibroids and normal ovaries were noted and a laparotomy was avoided.

These cases highlight the nonspecific nature of the tumor marker CA125 and the consequent need for exploration of other possibilities even when clinical picture and laboratory investigations suggest a seemingly obvious diagnosis.

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