A patient with ascites, pleural effusion, abdominocervical lymphadenopathy, bilateral ovarian cystic lesions and elevated CA-125 mimicking advanced ovarian carcinoma

To the Editor: Abdominal tuberculosis continues to be a significant health problem in the developing world. Recently there has been an increase in the number of cases in those parts of world where it was rare due to increasing travel and migration and also due to a rising number of HIV cases who are predisposed to opportunistic infections. Several reports have highlighted the remarkable similarity between this illness and ovarian carcinoma. We report a case with ascites, pleural effusion and abdominocervical lymphadenopathy and bilateral cystic ovarian lesions and elevated CA-125 which could have been treated as ovarian carcinoma and subjected to surgical resections and chemotherapy and their consequences.

A 47-year-old multiparous premenopausal woman presented with progressive abdominal distension of 4 weeks duration without any history of altered bowel habits, fever or any significant medical history. Examination revealed two mobile 2.5-cm right-sided cervical lymph nodes, right pleural effusion and ascites. Complete blood counts, kidney and liver functions were normal. ESR was 45 mm and ascitic and pleural fluid analysis revealed exudative lymphocyte predominant ascitic fluid. Cytology was negative for any malignant cells as was ascetic and pleural fluid AFB staining. Ultrasonography revealed ascites, bilateral 2-cm cystic lesions in the ovaries and a normal liver, spleen, and kidneys. CT scan of the chest revealed right pleural effusion (Figure 1) and a normal mediastinum. CT scan of the abdomen revealed ascites, multiple paraaortic, paracaval, paraceliac lymph nodes of variable size and confirmed bilateral ovarian cysts (Figures 2, 3). Upper and lower GIT endoscopies were normal as was barium follow-through. The possibility of ovarian carcinoma, lymphoma and tuberculosis were considered. A Mantoux test was negative. CA-125 levels of 531 Mu/L (0-35 normal) increased the suspicion for ovarian carcinoma. However, excisional biopsy of the cervical lymph nodes revealed caseous lymphadenitis (Figure 4). The patient was started on a four-drug regimen of antitubercular drugs, and within 4 weeks, ascites and pleural effusion disappeared. The patient was followed regularly and after 4 months of therapy a CT scan of the chest and abdomen were repeated, and revealed no pleural effusion, no ascites, resolved abdominal lymphadenitis and persistent same-sized ovarian cystic lesions (Figures 5, 6). CA-125 was repeated and had decreased to 36.1Mu/L. At that point the patient was doing well and was asymptomatic.

Tuberculosis continues to be an endemic disease in the developing countries. The risk factors for the development of tuberculosis include immigration, low income populations, immunosuppression, HIV, and living in close contact with patients suffering from tuberculosis. Disseminated tuberculosis accounts for 1% to 3% of cases that suffer from tuberculosis. Peritoneal tuberculosis has symptoms in common with advanced ovarian carcinoma. Pelvic pain and mass, ascites, and elevated serum CA-125 are well-known markers for ovarian cancer and for peritoneal tuberculosis. There are several case reports that point out the uncertainty in the preoperative differential diagnosis of peritoneal tuberculosis and advanced ovarian cancer.

Our patient presented with ascites, pleural effusion and abdominal lymph adenopathy. The difficult problem was to go for laparotomy, especially in the presence of bilateral cystic ovarian lesions and elevated CA-125. Elevation of CA-125 in peritoneal tuberculosis has been reported and misinterpreted with disseminated ovarian cancer with laprotomies and extensive surgical resections. The presence of
a cervical lymph node and its excisional biopsy prevented our patient from laparotomy and/or surgery and chemotherapy. The positive predictive value of the serum CA-125 to detect malignancy has been estimated at 60% generally, rising to 98% in postmenopausal women.6,8 The sensitivity and specificity of the CA-125 declines in the premenopausal age groups, presumably because of the high incidence of benign conditions that can cause elevation of this marker.9 For this reason, in young patients with elevated serum CA-125 levels, tuberculosis should be considered in the differential diagnosis, especially in areas where tuberculosis is endemic.2,8 Furthermore, CA-125 levels seem to serve as a potential follow-up marker of the disease activity in benign disease like tuberculosis.21,23 This was seen in our case also and the fall in CA-125 paralleled clinical and radiological improvement.

In conclusion, tuberculosis must always be considered in premenopausal women with low socioeconomic status, who are living in endemic areas of tuberculosis and with presenting signs of ovarian cancer like a pelvic mass, ascites, serum CA125 elevation, pleural effusion and abdominal lymphadenopathy. CA125 can be useful marker in the follow up of a benign disease like tuberculosis.

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We acknowledge Dr. Waleed Mohd Hussain (MD), Program Director,

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