Two cases of miliary tuberculosis and elevated levels of cancer antigen 125

Ovarian carcinoma is one of the most dangerous malignancies in women. The serum level of cancer antigen (CA) 125, as a tumour marker, is useful in the diagnosis of ovarian cancer. CA 125 serum level is also elevated in ascites (1), ovarian tube abscess (2,3), biliary duct cancer and periampullary tumours (4), cholangitis (5), cancer of pancreas (6) and cervical adenocarcinoma (7). Additionally, sometimes the serum level of CA 125 increases spontaneously during the menstrual cycle (8,9).

In bone marrow transplantation, this marker is a sensitive index in the diagnosis of veno-occlusive disease (10). We describe an elevated serum level of CA 125 in two cases of tuberculosis (TB): one with cryptogenic miliary TB, and the other with miliary TB and meningitis.

The first patient was an 80-year-old woman originally from a city in northeast Iran, but residing in Tehran. She presented with fatigue, weakness, and alteration in bowel habits. From a city in northeast Iran, but residing in Tehran. She presented with fatigue, weakness, and alteration in bowel habits. Radiography of the maxillofacial area, spinal column and sinuses, colonoscopy and barium enema, whole-body tomography (CT) scan, abdominal and pelvic sonography, and computed tomography (CT) scan. Gynecological evaluation showed only atrophic vaginitis.

Bone marrow biopsy revealed a granulomatous inflammation with caseification necrosis, compatible with TB. The patient was diagnosed with tuberculous meningitis and placed on isoniazid, rifampin, ethambutol and pyrazinamide. At the end of the second month of therapy, the patient's CA 125 serum level had returned to normal. She received isoniazid and rifampin alone from the beginning of the third month, and remained cured.

The second patient was a 25-year-old woman from Hamedan, Iran, who presented with fatigue, weakness, loss of appetite and hemoptysis. Loss of consciousness and obtundation occurred on the day of admission, and she progressed to deep coma within 4 h.

Brain CT scan showed no space-occupying lesion, but a chest radiograph revealed a diffuse miliary pattern. Lumbar puncture showed cerebrospinal fluid compatible with chronic meningitis, and a direct smear of cerebrospinal fluid showed acid-fast bacilli. CT of the abdomen and pelvis was normal. The CA 125 serum level was dropped from 113 U/mL on the first day of admission, and declined to 18 U/mL two months after initiation of treatment.

There is one other report of a patient with TB and elevated serum level of tumour markers. Rao et al (10) reported a patient with TB of the genital tract and an elevated level of serum CA 125. This patient presented with gastrointestinal signs and symptoms. The patient's CA 125 serum level was elevated at 163.1 U/mL, CA 19-9 was elevated at 54.1 U/mL, and para-aortic lymphadenopathy strongly suggested malignancy. Biopsy of ovaries, however, revealed granulomatous inflammation.

CA 125 is a glycoprotein existing on the surface of ovarian cells and other types of cells. Usually, an antigen level of over 35 U/mL is abnormal and warrants investigation. Tissue destruction releases CA 125 into serum, and successful treatment is associated with a decline in the serum level of this antigen.

These two cases show that CA 125 and some other tumour markers may increase in miliary TB. In both patients, successful treatment led to normalization of the CA 125 level.

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REFERENCES