



Abdominal Tuberculosis and value of CA 125 in diagnosis and completion of treatment- A Case Report

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Abstract

Tuberculosis is a common differential diagnosis in a case of ascites in Asian countries. A conclusive evidence of tuberculosis in form microscopy is important before started anti tubercular treatment. However, in many cases it is difficult or not possible to get microscopic evidence of tuberculosis. In these circumstances one has to rely on supportive evidence for diagnosis of tuberculosis. In our case of abdominal ascites caused by tuberculosis, TB PCR and TB culture was negative, although Histopathological finding were suggestive of tuberculosis as etiology. In addition CA 125 was found to be raised at the start of antitubercular treatment and it was normalized after completion of treatment. In this article we have reviewed publications on association of raised CA 125 with active cases of tuberculosis.

Keywords: CA 125, Abdominal tuberculosis.

Introduction

Tuberculosis cases have been increasing in numbers all over the world. Most concerning scenario is number of rifampicin resistance and Multidrug resistant cases are rising in newly detected tuberculosis and more prominently also in previously treated tuberculosis cases.

Tuberculosis has got new spring of life because of HIV pandemic. Tuberculosis ranks topmost among infectious disease, causing maximum number of deaths. Therefore, It is important to do early diagnosis and treatment of tuberculosis. Abdominal tuberculosis can present in multiple forms. Because of which on many occasions it is difficult to conclusively prove tuberculosis as causative agent. There is ever increasing need of finding additional markers of tubercular infection. A Case of 47 yrs old female with

abdominal tuberculosis is discussed. She had raised CA 125 levels at the time of diagnosis of tuberculosis. Her Ca 125 levels normalised at the completion of treatment of tuberculosis. Association of raised Ca 125 with abdominal tuberculosis is discussed.

Case Report

A 47 yrs old female, nondiabetic and nonhypertensive, had presented with complaints of distention of abdomen with lower abdominal pain since 1 month. She had decreased appetite and history of significant weight loss of 5 kg over last 2 months. She did not give any history of fever, vomiting or constipation. She did not have any menstrual irregularity. She did not have chronic cough. She did not have past history of tuberculosis.

On Examination- She had pallor, Pulse of 86 /min, Blood pressure of 120 / 80 mm of Hg, per abdomen examination showed that abdomen was distended but soft on palpation. Mild tenderness was present all over abdomen. She had normal bowel sound. She also had severe anemia with Hb of 6.4 gm/dl, WBC count of 4900/cmm with 70% neutrophils and 25% lymphocytes. Her ultrasonography of abdomen showed moderate ascites, A 3.6 x 3.3 cm sized left complex adnexal cyst with septation was seen. Therefore ovarian malignant pathology was considered as differential diagnosis. Her serum CA 125 was raised up to 700 U / ml (highly elevated) (Normal range - less than 46 U/mL).

Ascitic Fluid cytology showed 2500 cells / cmm with 90% lymphocyte. Fluid for TB PCR was negative. Her CT abdomen showed no significant abnormality in ovaries, there was ascites and Thickening of peritoneum and omentum. However no obstructive pathology was seen in intestine. Her Standard ELISA test for HIV 1 and 2 was done – It was negative. Anti HCV antibody was negative. Hepatitis B surface antigen testing was negative. She was given blood transfusion for severe anemia.

Her Diagnostic laparoscopy showed Moderate Ascites. Ascitic Fluid was sent for TB PCR examination and it was found to be negative. Ascitic fluid was sent for TB culture and it also did not grow any tuberculous organisms. During laparoscopy, it was found that she had innumerable tiny tubercles all over parietal peritoneum- even visceral peritoneum of intestines had multiple tubercle. Right ovaries fimbria was stuck to anterior abdominal wall and it also had cystic swelling - Parietal peritoneal biopsy and excision of the fimbria was done and sent for histopathology. Histopathology showed granulomas associated with caseous necrosis. It was suggestive of tuberculous etiology.

She was started on antituberculosis regimen of Isoniazide, Rifampicin, Pyrazinamide and Ethambutol. It was given for 2 month. In Continuation phase, she was given Isoniazide,

Rifampicin and Ethambutol Regimen for 10 months. At the end of treatment she had gained weight of 8 kg. Her symptoms of pain in abdomen and distention of abdomen had become normalised. She was declared cured of tuberculosis. At the end of treatment her serum CA 125 had normalised to 13.1 Units /ml. After 2 yrs of follow up the patient is asymptomatic.

Discussion

CA-125 is a cell-surface glycoprotein present in normal fallopian tubes, endometrium and in ovarian surface epithelium. R. C. Bast First time developed monoclonal antibody which will react with ovarian tumor and will not react to variety of normal tissue which was later on identified as CA 125¹. I. Jacobs et. al pointed out that CA 125 may also be associated with other malignancies and benign Conditions such as pregnancy and endometriosis².

Gurgan et. al reported two cases of pelvic peritoneal tuberculosis, where they it was found that serum CA 125 levels were high to begin with and they decreased after the treatment³. A.B. Younossian reported a case of long standing ascites with highly elevated CA 125 which was suspicious of malignancy but later on diagnosed as Tuberculosis and CA 125 normalised after completion of tuberculosis treatment⁴. H. Simsek et al. did a case control study in which they found that group having tubercular peritonitis had significantly higher CA 125 levels. In this study Ca 125 level normalised after completion of treatment⁵. Author further supported used of CA 125 as effective marker for diagnosis of peritoneal tuberculosis.

A. Yilmaz et al performed comparative analysis of CA 125 levels in pulmonary tuberculosis and Control group. He found that Ca 125 concentration had significantly increased in patients with active tuberculosis and CA 125 levels normalised after completion of treatment of pulmonary tuberculosis⁶. Y. Aoki et al in their comparative study found that CA 125 is useful in diagnosis of tubercular pleuritis⁶. Joseph D boss

reported a case where ascites, bilateral adnexal masses were wrongly diagnosed as ovarian malignancy based on raised CA 125 resulting in surgical treatment which later on diagnosed as tuberculosis of abdomen⁷.

In our case report of peritoneal tuberculosis, it was found that CA 125 was significantly increased and it was normalised after completion of treatment of tuberculosis.

Conclusion

CA 125 is raised in patients with active tuberculosis and it is found to be normalized after completion of treatment. Further studies need to be conducted to validate its usefulness in diagnosis and treatment of tuberculosis.

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