



## CASE REPORT

# High CA 125 in a Case of Abdominal Tuberculosis mimicking Ovarian Malignancy

<sup>1</sup>Sushil Kumar, <sup>2</sup>Iqbal Tintoiya, <sup>3</sup>Nimisha Srivastava, <sup>4</sup>Pratima Thamke

## ABSTRACT

A 45-year-old patient was admitted with history of abdominal pain and distension. Clinically diagnosis was pointing toward a case of right-sided ovarian mass with ascites. Computed tomography (CT) scan of the abdomen was suggestive of mucinous cystadenoma of right ovary with moderate ascites. Ascitic fluid tap was exudative in nature and negative for malignant cells. Blood investigations were within normal limits except for raised CA 125 (more than 1000 mIU/L) and raised erythrocyte sedimentation rate (ESR) (112 mm/h). Our provisional diagnosis was serous cystadenocarcinoma right ovary or pelvic tuberculosis (TB) involving right adnexa and pelvic peritoneum. Ascitic fluid findings were more in favor of pelvic TB, therefore the patient was started on antitubercular treatment (ATT) on trial basis. The patient responded considerably well to ATT.

**Keywords:** Abdominal tuberculosis, Ascites, CA 125.

**How to cite this article:** Kumar S, Tintoiya I, Srivastava N, Thamke P. High CA 125 in a Case of Abdominal Tuberculosis mimicking Ovarian Malignancy. *MGM J Med Sci* 2016;3(1):51-52.

**Source of support:** MGMIHS

**Conflict of interest:** None

## INTRODUCTION

Tubo-ovarian (TO) mass with raised CA 125 level and ascites mostly indicate an underlying ovarian malignancy. Many consider CA 125 levels more than 100 mIU/L almost synonymous with ovarian malignancy. However, CA 125 has low sensitivity and specificity as far as diagnosis of ovarian malignancy is concerned. There are many benign conditions where CA 125 can be abnormally high. One such case is reported here.

## CASE REPORT

A 45-year-old patient was admitted with history of abdominal pain and distension of 5 months' duration.

<sup>1</sup>Professor and Head, <sup>2,3</sup>Resident, <sup>4</sup>Assistant Professor

<sup>1-4</sup>Department of Obstetrics and Gynaecology, MGM Hospital Navi Mumbai-410208, Maharashtra, India

**Corresponding Author:** Nimisha Srivastava, Resident Department of Obstetrics and Gynaecology, MGM Hospital Kalamboli, Navi Mumbai-410208, Maharashtra, India, Phone: +919821311400, e-mail: nims\_2390@yahoo.com

She did not have any significant past medical or surgical history. On clinical examination the patient was thin-built, and all vital parameters were within normal limits. Abdomen was distended and an ill-defined nontender mass was palpable in the right iliac fossa. On pelvic examination uterus was found to be bulky, and there was an approximately 6 × 5 cm size mass in right fornix. Laboratory Investigations: Hb 10.7 gm/DL, white B coo (WBC) 7800 cells/mm<sup>3</sup>, platelets 3.80 lakh/L, ESR (erythrocyte sedimentation rate) 112 mm/h, and CA 125 more than 1000 mIU/L. Ultrasonography (USG) abdomen findings: uterus 8.1 × 4.2 × 5.2 cm anteverted, nongravid, and free fluid in pelvis. The right ovary enlarged 4.7 × 1.9 × 1.3 cm with cystic components of 2.6 × 2.2 × 2.6 cm with multiple septations. Computed tomography (CT) scan abdomen and pelvis suggested: mucinous cystadenoma right ovary (5.0 × 2.6 cm), left ovary normal, and moderate ascites with right-sided pleural effusion. Ascitic fluid tapping was done. Ascitic fluid was exudative in nature, negative for acid-fast bacilli, and cytology was negative for malignant cells.

In view of evidence of pleural effusion, ascitic fluid being exudative in nature and raised ESR, a strong possibility of pelvic tuberculosis (TB) was considered. In absence of bacteriological diagnosis, it was decided to give the patient a therapeutic trial of antitubercular treatment. The patient was started on Antitubercular treatment (ATT) – Rifampicin 450 mg, Isonizide 300 mg, Pyrazinamide 1125 mg, and Ethambutol 800 mg. After 10 days of starting ATT, the patient showed considerable response. Her appetite improved, weight increased, ascites decreased, and ESR and CA 125 also showed considerable reduction. After 10 days of ATT, the patient was discharged with advice to continue antitubercular drugs for 1 month. She followed up after completion of 40 days of ATT. There was a marked improvement in her general condition. Her appetite had improved and she had 5 kg of weight gain. CA 125 level was repeated and value was reduced to 12.2 mIU/L while ESR was reduced to 12 mm/h. The follow-up CT abdomen and pelvis showed no evidence of pleural effusion, ascites, or TO mass. Considering the improvement in all parameters, patient was put on ATT for a total of 6 months.

## DISCUSSION

CA 125 is a cell surface antigen expressed by derivatives of the coelomic epithelium (including endometrium) and is well established as a useful marker for the monitoring of the women with epithelial ovarian cancer. Moderate elevated levels (35–100 mIU/L) are often seen in endometriosis, early pregnancy, and acute pelvic inflammatory disease, besides several other benign conditions.<sup>1</sup> There are a few probable explanations for raised CA 125 levels in abdominal TB. Activation of inflammatory cascades due to mycobacterium TB may cause abnormal mesothelial cell proliferation, leading to elevated CA 125 levels. A second possible theory may be the similarity of certain surface antigens of mycobacterial cell membrane with epitopes of CA 125 tumor marker.<sup>2</sup>

Some cases of raised CA 125 in tubercular peritonitis have been reported previously. Thakur et al reported a case of a 48-year-old female diagnosed with TB peritonitis with increased CA 125 which was cured following antitubercular treatment, and the tumor marker level returned to normal.<sup>3</sup> Uzunkoy and colleagues reported of elevated levels of CA 125 in four abdominal TB patients. In another case reported by Tan et al, a patient finally diagnosed with peritoneal TB showed elevated serum CA 125 level mimicking advanced stage of ovarian cancer. Following ATT the symptoms resolved and CA 125 levels returned to normal.<sup>4</sup>

There have also been some cases with raised CA 125 in pulmonary TB. One such case of markedly elevated CA 125 levels in a woman with pulmonary TB, which returned to normal after ATT, was reported by Sulaiman and Tan in 2009.<sup>5</sup>

## CONCLUSION

Raised CA 125 levels are generally seen in cases of ovarian malignancy. However, exceptionally high CA 125 may also be seen in patients with abdominal and pelvic TB especially in the context of Indian subcontinent.

## REFERENCES

1. Fritz MA, Speroff L. Clinical gynaecologic endocrinology and infertility. 8th ed. Philadelphia (PA): Lippincott Williams & Wilkins; 2011. p. 1221-1248.
2. Tan O, Luchansky E, Rosenman S, Pua T, Azodi M. Peritoneal tuberculosis with elevated serum Ca-125 level mimicking advanced stage ovarian cancer: a case report. Arch Gynecol Obstet 2009 Aug;280(2):333-335.
3. Thakur V, Mukherjee U, Kumar K. Elevated serum cancer antigen 125 levels in advanced abdominal tuberculosis. Med Oncol 2001;18(4):289-291.
4. Uzunkoy A, Harma M, Harma M. Diagnosis of abdominal tuberculosis: experience from 11 cases and review of the literature. World J Gastroenterol 2004 Dec 15;10(24):3647-3649.
5. Sulaiman S, Tan KH. Markedly-elevated serum CA125 in a woman with pulmonary tuberculosis. Singapore Med J 2009 Jan;50(1):e39-e40.