

Isolated Bilateral Ovarian Tuberculosis Mimicking Ovarian Carcinoma: A Rare Case Report

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Abstract: Genitourinary tuberculosis is not very uncommon but reports of isolated ovarian tuberculosis is rare. It can be easily misdiagnosed due to its presentation mimicking ovarian carcinoma. a 14 year old girl presented with pain abdomen, pelvic pain, abdominal distension and weight loss. Her USG abdomen showed ascites with normal adnexa but CECT abdomen showed bilateral ovarian masses. Serum CA-125 Level was elevated significantly. USG guided FNAC of the ovarian masses showed caseating mycobacterial inflammatory lesions positive for Acid Fast Bacilli with ZN Stain with no signs of malignancy. Antituberculosis treatment was started, with full resolution of her symptoms and a decrease in serum CA-125 Level. Isolated ovarian tuberculosis should be kept in mind while evaluating ovarian masses in young females of endemic zone. CA-125 is raised in both the conditions and radiological findings are mostly inconclusive. Early diagnosis and treatment of ovarian tuberculosis is vital for a young female of reproductive age group to prevent infertility.

Key WORDS- Ovarian Tuberculosis, Ovarian Carcinoma, CA-125

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I. Introduction

Tuberculosis remains a major global health problem. For the past 5 years, it has been the leading cause of death from a single infectious agent, ranking above HIV/AIDS.¹ Extrapulmonary tuberculosis accounts for 15-20% of all cases of tuberculosis, of which abdominal tuberculosis accounts for 11-16% & pelvic tuberculosis accounts for 5.7%.² Pelvic tuberculosis is a great mimic because of its protean manifestations and can be easily confused with peritoneal carcinomatosis and ovarian carcinoma.

II. Case Report

A 14 year old nulliparous woman presented with abdominal pain and distension for 2 weeks. It was associated with low grade fever, fatigue and anorexia. she also reported a weight loss of 4 kg in the last 2 months. She had received BCG vaccination at birth and there was no history of contact with a case of tuberculosis. She attained menarche 3 months back, had her first menstrual cycle followed by amenorrhoea for last two months. Physical examination revealed tense ascites with fluid thrill. No lymph node enlargement was noted.

Blood tests showed moderate anemia (10 g/dl) and elevated esr of 60 mm/hr. Mantoux was strongly positive (20 x 25mm). Serum CA-125 was 25 times elevated (885 U/ml). Serum LDH level was also raised (665 IU/L). Serum Beta HCG, CEA, Alfa-Feto Protein, ANA, Anti ds-DNA, TSH, T3, T4 Levels were normal. Ascitic fluid analysis showed total protein -4.7 g%, Sugar-68mg%, Total cell count-250 Cells/mm³, Differential count-95% Lymphocytes, 5% Neutrophils and an elevated ADA (56.4U/L). Liver and kidney function tests and urine examination were normal. Endometrial biopsy showed no evidence of tuberculosis with endometrium in the proliferative phase.

Plain radiography of chest and abdomen were normal. USG whole abdomen and pelvis showed gross ascitis, mild splenomegaly, fatty liver and bilateral normal adnexa. CECT Abdomen revealed bilaterally enlarged ovaries (Right-4.3 X 3.8 X 4.5 cm³ and Left-5.9 X 3.6 X 4.2 cm³), hepatosplenomegaly (Liver-16 cm, Spleen-12 cm) and massive ascites. USG guided FNAC revealed well formed epithelioid granulomas in a background of extensive caseation necrosis and ZN stain showed Acid Fast Bacilli.

Category 1 anti tuberculosis regimen was initiated and patient was followed up. Recovery was marked by weight gain of 4 Kg, complete resolution of abdominal pain and distension and a decrease in serum CA-125 levels.

III. Discussion

Ovarian tuberculosis consists of 20-30% of all cases of genital tuberculosis. Most frequently it is a perioophoritis resulting from a spread the adjacent fallopian tubes, when the ovary seems to be encased amongst adhesions. However isolated ovarian tb with no other organ involvement as in this case is rarely reported in literature. It may sometimes follow a hematogenous spread and cause caseating granulomas within the parenchyma of the ovary.³

When it presents with ascites, a pelvic mass and an elevated CA-125 levels, differentiation from ovarian cancer is essential as the treatment of these two conditions differs vastly. However it can pose a major diagnostic challenge even to an astute clinician.⁴

Some demographic factors may help in raising clinical suspicion. It usually affects young women aged 20-40 years who are living in endemic zones of tuberculosis, like India.^{5,6} Patient of genitourinary TB may present with infertility, pelvic pain, abdomino-pelvic mass, ascites, weight loss, menstrual problems such as amenorrhea & dysmenorrhea. A past history of pulmonary tb is not obligatory, as demonstrated by our case.⁷

A positive Mantoux test and staining for Acid Fast Bacilli in either pleural or ascitic fluid may aid the diagnosis, but may be negative despite extensive disease.⁴

CA-125 though initially thought to be specific for ovarian malignancies, was later found to be raised in a variety of benign conditions, including pregnancy, pelvic inflammatory disease, tuberculosis and cirrhosis of liver.⁸ The positive predictive value for malignancy in postmenopausal women is nearly 95%. In the case of ovarian TB, its level rarely rises above 500 U/ml but in present case the levels were much higher, thus increasing the diagnostic dilemma.⁷ Imaging has low specificity, with both ovarian malignancy and tuberculous abscess having similar appearances on Ultrasound, Computerized Tomography And Magnetic Resonance Imaging. Ascites and lymphadenopathy are frequently present in both the conditions, thus complicating the clinical differentiation. ultrasound guided transvaginal or transabdominal biopsies may be used for preoperative diagnosis.⁷ If the resources are available, intraoperative frozen section of tissue specimens can be very helpful. Although histological demonstration of TB can be difficult sometimes, the lack of malignant cells may indicate an alternative diagnosis.⁶

Treatment for genital TB is medical. Although most cases resolve with Antitubercular treatment, the long term prognosis for patient's fertility is poor. One study estimated that pelvic tb was responsible for more than 39% of cases of Tubulo-Ovarian infertility.⁷ Early diagnosis and the prevention of TB, including BCG immunization campaigns, in are important order to avoid infertility.

IV. Conclusion

Isolated ovarian tuberculosis is rare but an important differential diagnosis for ovarian malignancy. It can mimic ovarian malignancy, presenting as an ovarian mass, ascites and raised CA-125 Level. It should be kept in mind as a differential diagnosis, especially in tuberculosis endemic areas.

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