Pelvic - Peritoneal Tuberculosis Mimicking Ovarian Malignancy: A Case Report

Corresponding Author:
Dr. Sunita Gupta,
Assistant Professor, Subharti Institute of Medical Sciences, 250001 - India

Submitting Author:
Dr. Sunita Gupta,
Associate Professor, Subharti Institute of Medical Sciences, 250001 - India

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Author(s): Gupta S , Tomer G

Abstract

Diagnosis of pelvic-peritoneal tuberculosis is often difficult, because of its nonspecific clinical, laboratory and radiological findings. The presence of an adnexal mass, ascites, and raised CA 125 level, may be mistaken as ovarian malignancy. Peritoneal tuberculosis should be considered in the differential diagnosis of adnexal masses, ascites and elevated CA 125. Ascitic fluid ADA, PCR for M. tuberculosis and endometrial biopsy may help to distinguish pelvic-peritoneal tuberculosis from ovarian malignancy. Peritoneal tuberculosis can be managed by ATT, therefore these test should be performed before surgery to exclude peritoneal tuberculosis, so that invasive and expensive surgery could be avoided.

Introduction

Pelvic-peritoneal tuberculosis remains a global health problem, primarily in developing countries. Diagnosis of pelvic-peritoneal tuberculosis is often difficult, because of its nonspecific clinical, laboratory and radiological findings. Peritoneal tuberculosis is the most common form of abdominal tuberculosis after gastrointestinal tuberculosis. There are several reported cases of female patients whose symptoms clinically mimic ovarian cancer due to the presence of an adnexal mass, ascites, and raised CA 125 level (the commonly used tumor marker for ovarian carcinoma). Because of the insensitivity and nonspecificity of the currently used clinical and biochemical tests, diagnosis is usually depended on peritoneal biopsies by laparoscopy or laparotomy. These are invasive and expensive methods and is associated with complications.

Case Report

A 38 year old, multiparous female was admitted with complaints of abdominal pain and distension since 2-3 months. Abdominal distension was gradually progressive and it was associated with dull aching pain which was non-radiating and not associated with any aggravating or relieving factor. Her medical and family history were unremarkable. She had previous 4 normal deliveries and used no contraception. She also had lactational amenorrhoea for last 18 months. Patient was afebrile at the time of admission and had no signs of anemia, lymphadenopathy, clubbing or jaundice. The abdomen was distended and shifting dullness was present. Pelvic examination revealed normal size, anteverted, mobile uterus. Bilateral adnexa were palpable. Ultrasonography showed – intra abdominal fluid 800-1000cc, mostly in paracolic gutters and pelvis, endometrial thickness was-15 mm. A cystic mass of 6 x 6 cm with internal echoes and thin septations suggestive of haemorrhagic cyst was present in left ovary. Right ovary was bulky, heterogenous, 5 x 8 cm in size with altered echopattern. Her chest X-ray was normal. Her hemoglobin was 11 gm%, TLC -6390/cumm and DLC -P 60% L38 E 2%. ESR- 26 mm , Blood urea 28.1 mg %, Serum creatinine 0.6mg %, Serum bilirubin 0.7, SGOT 30 IU, SGPT 21 IU. Alka phos 122 IU, montoux test 25x30 mm (Reactive). CA 125 -176.9 U/ml. Computed tomography (CT) showed gross ascitis with left sided haemorrhagic cyst with right sided malignant ovarion tumour. Ascitis fluid cytology showed lymphocytic exudates with few RBC's, Sugar 45 mg%,  Protein 6 gm%, negative for Acid fast bacilli, negative for malignant cell. Adenosine deaminase (ADA) -186 U/L (raised). Endometrial biopsy showed pre-menstrual phase with granulomatous tubercular inflammation. Patient was diagnosed as a case of pelvic peritoneal tuberculosis and kept on antitubercular treatment (ATT) for 9 months. She responded to treatment and now a days (after one year of completion of ATT) she has no signs of recurrence.

Discussion

Majority of the cases with peritoneal tuberculosis can be diagnosed intraoperatively through the use of frozen section in conjunction with clinical features. (1) Ascitic fluid ADA activity may be a useful marker for diagnosis of peritoneal tuberculosis,(2) several studies reported 100% sensitivity for the diagnosis of peritoneal tuberculosis, with specificities in the range of 92-100% (3,4) . An elevated ADA level (> 32 U/L) in ascitic fluid could obviate the need for more invasive
and expensive diagnostic tests. Although false negative results may occur when the ascitic fluid total protein concentration is low as in cirrhosis (3) In countries with a high incidence of tuberculosis and in high risk patients ascitic fluid ADA might be a useful screening test. CA 125, which is a tumor-associated antigen, is a nonspecific marker of ovarian cancer and may cause confusion, as it is elevated in a variety of conditions such as infections, tuberculosis, endometriosis, Meigs syndrome, menstruation, ovarian hyperstimulation and a number of non-gynaecologic conditions like active hepatitis, acute pancreatitis, pericarditis, pneumonia, etc. (5) If pelvic-peritoneal tuberculosis is suspected, histological examination of premenstrual endometrial biopsies or curettage may yield granuloma in 50-70% of case. Polymerase chain reaction (PCR) for mycobacterium tuberculosis complex of ascitic fluid obtained by ultrasound-guided fine needle aspiration is a reliable method for its diagnosis and should at least be attempted before surgical intervention (6). If these test are negative, laparoscopy may be performed to obtain tissue for histological diagnosis.

ATT alone may be an effective treatment in pelvic-peritoneal tuberculosis, obviates the need for invasive methods. Indications for surgery include persistence of pelvic mass and recurrence of pain or bleeding after 9 months of treatment. (7)

Conclusion

Medical awareness of peritoneal tuberculosis is still lacking and many women with this disease are initially thought to have ovarian malignancy and undergo unnecessary extended surgery and majority of the cases of peritoneal tuberculosis are diagnosed intraoperatively. Maintaining a high index of suspicion is very important for the successful treatment of peritoneal tuberculosis, especially in developing countries. Peritoneal tuberculosis should be considered in the differential diagnosis of adnexal masses, ascites and elevated CA 125. Ascitic fluid ADA, PCR for M. tuberculosis and endometrial biopsy may help to distinguish pelvic-peritoneal tuberculosis from ovarian malignancy. Peritoneal tuberculosis can be managed by ATT, therefore these test should be performed before surgery to exclude peritoneal tuberculosis, so that invasive and expensive surgery could be avoided.

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