

**FEMALE GENITAL TRACT TUBERCULOSIS PRESENTING AS OVARIAN CANCER –
A CASE REPORT****¹*Dr. Aruna Bhattacharya, ²Dr. Jaydip Deb, ³Dr. Rama Saha and ⁴Dr. Sumanta Banerjee**¹*Associate Professor, Department of Biochemistry, B.S. Medical College & Hospital, Bankura. West Bengal, India.²Professor & Head, Department of Pulmonary Medicine, B.S. Medical College & Hospital, Bankura. West Bengal, India.³Associate Professor, Department of Pathology, Institute of Postgraduate Medical Education & Research, Kolkata, West Bengal, India.⁴MD PGT, Department of Biochemistry, B.S. Medical College & Hospital, Bankura, West Bengal, India.***Correspondence for Author: Dr. Aruna Bhattacharya**

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ABSTRACT

Tubercular involvement of the genitourinary (GU) or gastrointestinal (GI) tract, peritoneum, lymph nodes or viscera, constitutes up to 12% of extra pulmonary TB^[1] and its nonspecific signs and symptoms may be similar to GI or ovarian cancers. This case report illustrates a case of ovarian tuberculosis with peritoneal involvement, whose initial provisional diagnoses was malignant processes of the GU tract.

KEYWORDS: Tract, peritoneum, lymph nodes or viscera, constitutes up to 12% of extra pulmonary TB.**INTRODUCTION****Case Report**

A 48.8 kg, 32 year old parous lady came with c/o lower abdominal pain since 2 months, abdominal distension & white discharge. Bladder & bowel were normal. 1st pregnancy was a miscarriage and 2nd issue was a 12 old male and the 3rd was an MTP. No significant medical history was recorded. No lymph nodes were palpable. Pulse, BP were stable. Blood sugar, Thyroid profile, serum electrolytes, HIV, HbSAg, urea, creatinine, Bilirubin, TP, Albumin, Globulin, PT, APTT were normal. SGOT, PT were 248 & 220 IU/L respectively and GGT-86 IU/L (f<38).CA 125 was 474.0(N<35 IU/L).

USG showed mild fatty liver with bulky uterus (6.2x5.6x4.4 cms) with bilateral adnexal heterogenous lesions measuring 6.3x4.4 cms noted in the rt. adnexae. Another mixed echoic lesion measuring 7.1x5.7 cms noted in the Lt.adnexae and also abutting the uterus. Fluid collection was seen in the Left adnexae.

Gastroscopy showed reflux oesophagitis, in the distal area with 2 linear mucosal breaks (<5cms seen) Pelvic scan & TVS showed uterus AV, APD 5.5 cms, bulky with homogenous myometrial echoes. Endometrial cavity normal with endometrial thickness 7.0mm.RO enlarged (6.6x4.7cms) It contains mixed echogenic components with cystic areas & septations. Septal vascularity was seen. Left ovary contains cyst measuring 5.5x3.6 cms with mixed echogenic components &

septation. Encysted with filmy septation structure measuring 11.0x4.6cms is seen in the left adnexa. No free fluid is seen in the pouch of Douglas. All findings are suggestive of bilateral ovarian cyst with atypical endometrioma along with encysted fluid collection in the left adnexa.

Laparotomy, adhenolysis, salphingoophorectomy, omental biopsy done. Operative Laparotomy was done under ETGA.abdomen opened by midline vertical incision. Dense omental and bowel adhesions to the anterior abdominal wall were seen & the same were released. Moderate ascitis was seen & the same sent for cytology. Diffuse nodules seen over the whole omentum & the bowel. Cocooning of bowel seen. Omentum with nodules sent for frozen section. (reported to be granulomatous reaction). Adhesenolysis was done & pelvic cavity was reached. Uterus normal size, densely adherent to the mass and the bladder. Bilateral TO mass seen, densely adherent to the uterus, tube & the lateral pelvic wall. Rt. TO mass measured 6x6cms enlarged with pus collection. Left ovary appeared enlarged adherent to the tube forming a TO mass of about 4x4 cms. Rt.TO mass was also adherent to the ureter. Ureter lateralised &Rt. Salphingoophorectomy done. Bladder integrity checked with methylene blue intact. Omental biopsy taken. Haemostasis secured. Left sided adhesions of ovary with the tube were released so far as possible.

M/E Section shows fat with nodules showing granulomatous inflammation. Wall of F.Tube with

necrotising granulomatous inflammation. Mucosa shows reactive proliferation. Granulomas are distributed throughout the wall upto serosa. Adherent ovarian tissue is seen in some sections. Stain for AFB-TB shows occasional AFB bacilli. Ovary with pallisading histiocytic granulomatous reaction with fibrosis and some cystic follicle. There is necrosis. All the features are suggestive of tuberculoalpingoophoritis of Rt. tube & ovary.

Pus –AFB stain showed occasional AFB but no fungus and gram stain showed no bacteria, there were only few pus cells.

Peritoneal Fluid for cytology showed reddish yellow turbid peritoneal fluid with few lymphocytes, histiocytes & rare mesothelial cells and negative for malignant cells.

Specimen received for HPE (fig.3) showed omentum with Rt. Sided TO Mass as yellowish fatty tissue measuring 4x2x0.5cm & 2 pale pink nodules measuring 0.6cm & 0.8cm. across is noted. The TO mass measured 8x5.5x4 cms noted. External surface appear irregular and nodular. Serial section shows solid area with yellowish white to tan yellow exudates. A cystic cavity measuring 2 cms across filled with greyish white exudat suggestive of tube identified measuring 10x7.5x3cms. Serial section through the omentum showed greyish white areas.

HPE showed necrotizing granuloma (fig.1&2) with presence of AFB.

Postoperative LFT showed bilirubin within normal limits, TP-5.3, albumin-2.3, globulin-3.0, OT-14, PT-28, GGT-48, ALK.PO-93.

Postoperative serum electrolytes showed K-4.4, Cl-133, Na-171, all units were in meq/L. (normal values were 93.5-5.1, 98-107, 136-145 meq/L respectively) and chest xray showed no free peritoneal air, no distended bowel loops, no air fluid levels within.

X-PERT MTB/RIF assay –MTB complex detected. Rcin resistance not detected. Specimen of pus & tissue from rt. ovary showed no growth. by gram stain.

Cytology-liquid based cervical smear negative for intraepithelial carcinoma.

Postoperative antitubercular drugs were given. From 2nd day, patient responded well, routine postoperative parameters were normal, Hb.9.9gm/dl, neutrophilia with thrombocytosis with platelet clumps were seen which became normal gradually & she was discharged on day7. Patient was asked to call if there is temperature rise, onset of new pain, worsening of previous pain, vomiting, altered level of consciousness, discharge from operative wound, worsening of any symptoms. Postoperative CA125 after 3 months showed decline in the levels. Patient developed Rifampicin induced jaundice which

was corrected by withdrawal of the drug temporarily for a short period. Patient was well and asymptomatic after 7 months of operation.

Histopathology of right fallopian tube showing chronic inflammatory cell infiltration and granuloma formation with giant cells and central necrosis in some granulomas in (1) low-power fields and (2) high-power fields.

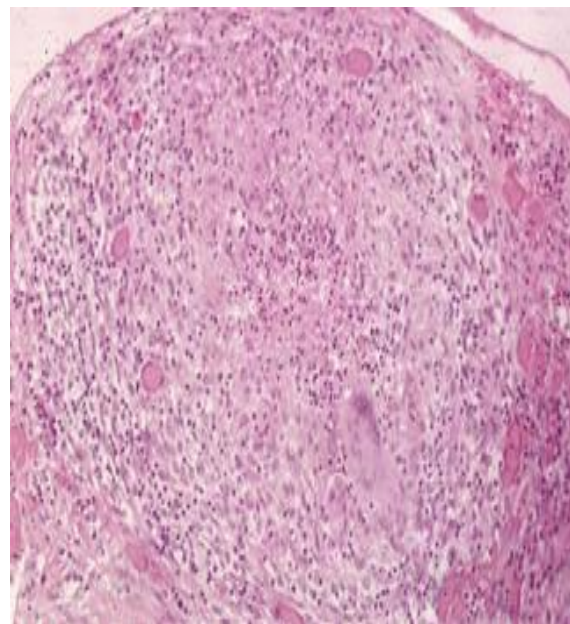


Figure 1

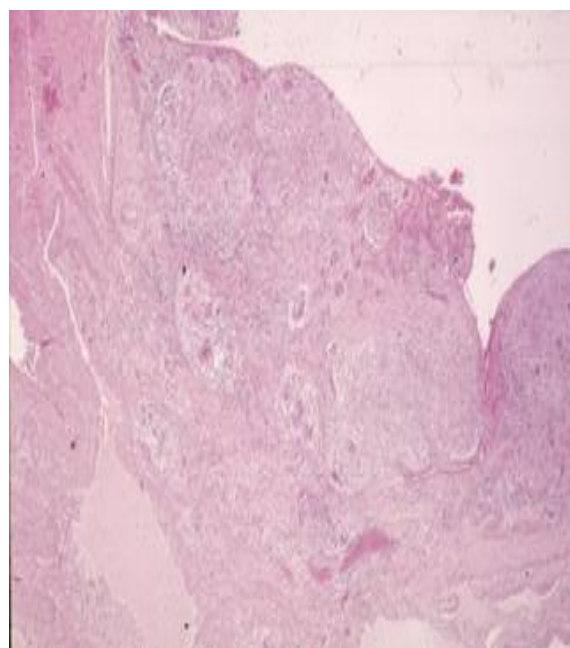


Figure 2



Figure 3. Gross View

DISCUSSION

Tuberculosis is still a major worldwide concern. There is no pathognomonic clinical feature or imaging findings for definite diagnosis of extra pulmonary TB. Therefore, TB involvement of GI or GU tract can be easily confused with peritoneal carcinomatosis and advanced ovarian carcinoma.^[2] Pelvic TB can be caused by reactivation of the organism (spread via blood stream, lymphatic system or direct from the involved abdominal organs such as intestines) or rarely by venereal transmission. Patients have diverse symptoms including pelvic pain, infertility, fever, abnormal uterine bleeding, ascites and pelvic mass. CA-125 level, a tumor marker for ovarian cancer may also increase in TB. Although the presence of a pelvic mass associated with ascites, high CA-125 levels and peritoneal seeding strongly suggests pelvic malignancies, we should always consider the possibility of miliary tuberculosis, tuberculosis peritonitis or ovarian TB with peritoneal seeding, to prevent unnecessary surgery and starting appropriate and timely therapy. Ovarian tuberculosis occurs in 15-25% cases and most often results from direct extension from fallopian tubes. In such cases, ovary may be surrounded by adhesions or may be the site of tubo-ovarian cyst formation or tubo-ovarian mass with adhesions surrounding them. In patients with haematogenous spread caseating granulomas may be seen in the parenchyma of ovary.^[3] Some factors which may be helpful for the diagnosis of TB include:

Patient's race and geographic location (our patients was from Bankura region of west Bengal).

Personal or family history of TB, which is always suggestive^[4], Our patients had a history of TB in their first degree relatives.

Patient's age. TB mostly occurs at reproductive ages (20-40) while ovarian cancer happens at older ages. The peak

incidence of invasive epithelial ovarian cancer is at 56 to 60 years of age.^[5] In our study, patients was about 20 years old.

Weight loss is uncommon even in advanced ovarian cancer. The most common clinical symptoms of pelvic tuberculosis include pelvic pain, general malaise, low-grade fever, weight loss, menstrual irregularity and infertility. The failure of fever to subside with high doses of broad-spectrum antibiotics is a classic feature of pelvic tuberculosis. Our case had weight loss with h/o low fever. The clinical symptoms and signs of pelvic tuberculosis should direct the clinician to the diagnosis. However, the disease is so uncommon that it is seldom encountered in the gynecologist's usual practice; therefore, the clinical index of suspicion is generally low. In many cases, the clinical presentation is obscure and the diagnosis is delayed. The incidence of tuberculosis is rising in the world and gynecologists need to be aware that tuberculosis may be present in an atypical manner.^[6]

Non-invasive methods such as tuberculin skin test, chest radiographs or acid-fast staining and culture of the aspirated fluid from peritoneal cavity are usually insufficient to provide the diagnosis of peritoneal or pelvic TB.^[7]

Performing a CXR before surgery may be helpful and should certainly be done. our patient had a normal chest X-ray. Tuberculin skin test, CBC and sputum staining are usually not helpful, as in our patient.

In the presence of ascites or fluid in the pelvic cavity, staining and culture of the material might be helpful but usually give negative results, such as our presented cases. Some recently published studies argue that a positive PCR assay or high adenosine deaminase (ADA) level in aspirated fluid is diagnostic for TB.^[5,8]

CA-125 which is a marker for malignant non mucinous ovarian cancer is nonspecific at premenopausal age, considering its increased levels in non-malignant disorders such as TB,^[9,10] endometriosis, myoma, cirrhosis, hepatitis and pancreatitis. However it has a high specificity (98%), sensitivity of 58% and a PPV of about 2% at postmenopausal ages.^[11] CA-125 can be increased in peritoneal TB.

Hence, in a case of pelvic mass with high CA-125 level at reproductive ages, non-malignant disorders such as TB should always be considered.

Regarding the young age of our case, increased levels of CA-125 marker could not be diagnostic for a malignant process. A definite diagnosis of tuberculosis is established by pathology report of the specimens obtained by biopsy and frozen section, which is not always successful and may be associated with several complications.

Our patient responded well to anti-tuberculosis therapy with favourable outcome.

Meta-analysis should be performed on patients diagnosed with peritoneal and pelvic TB. According to the epidemiological clues of our case, we emphasize the value of detailed history taking from the patients, with regard to their age, race and nationality, geographic location of living, social situation and family history for widening the range of differential diagnoses to include Tb in the d/d of TO mass.

Tuberculosis (TB) should be always being considered in the differential diagnosis of advanced ovarian cancer, especially in the regions that are endemic for the disease.

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