

Abdominopelvic tuberculosis masquerading ovarian malignancy - Histopathology key to management

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ABSTRACT

Abdominopelvic tuberculosis (genital tuberculosis) may mimic ovarian malignancy in clinical presentation, ultrasound findings and laboratory tests. We present two cases of genital tuberculosis where a provisional diagnosis of ovarian carcinoma was made. One patient underwent surgery and the other was treated conservatively. These cases underline the mandatory need of a high index of suspicion in our country, towards pelvic tuberculosis preoperatively in a patient with adnexal mass.

Key words: Genital tuberculosis, CA-125, adnexal mass, ovarian malignancy

Introduction

The incidence of abdominopelvic tuberculosis has increased worldwide in the last decade. It is believed that in India about 2-3 million cases are detected every year.^[1] Tuberculosis may have many clinical presentations; one of which is the abdominopelvic form which occurs more frequently in women.^[2] This form of tuberculosis may simulate ovarian carcinoma.

Case Report

Case 1

A 40 year nulliparous woman married since 15 years, presented with abdominal discomfort and low grade fever of 2 months, hypomenorrhea since 3 months. Her father had been treated for Kock's about one year ago. General and systemic examination was normal. Abdominal examination revealed a vague suprapubic mass of 12 weeks size, firm in consistency, non-tender with restricted mobility. The same mass was felt at vaginal examination, more in the anterior fornix and appeared continuous with the uterus. The mass was also felt at rectal examination and

nodularity was present in the pouch of Douglas.

Complete haemogram, blood sugar, renal function tests was normal, erythrocyte sedimentation rate (ESR) was 40 mm/h. Chest X ray was also normal. On transvaginal sonography (TVS), a complex multiseptated mass (septal thickness 6 mm) in the right adnexa, measuring 8.4 x 8.7 cm with solid areas and minimal ascites was seen (Fig. 1). The CA-125 was 107 U/ml. However Doppler indices were suggestive of benign nature of the tumor.



Fig-1 TVS showing thick septa and solid areas

Considering the age, with nonspecific abdominal symptoms and a complex adnexal

mass with raised CA-125 level, ovarian malignancy was suspected and patient was posted for staging laparotomy.

At laparotomy, minimal straw colored ascitic fluid was present which was sent for cytology. There was a multiloculated complex right ovarian mass measuring 8 x 8.5 cm, which ruptured on manipulation and poured out cheesy necrotic material. Left ovary showed a similar mass of 5 cm. Omentum, intestine, fallopian tubes and pouch of Douglas were studded with numerous small, white tubercular deposits. Cheesy material was found floating in the peritoneal fluid. Liver, gallbladder, spleen, pancreas and kidneys were normal. Flimsy adhesions were found between loops of intestine and the uterus. Total abdominal hysterectomy with bilateral salpingo-oophorectomy and omental biopsy was done. Postoperative period was uneventful.

Histopathology revealed bilateral tuberculous salpingo-oophoritis with tuberculous peritonitis. Both the ovaries showed caseating epithelial granulomas with giant cells studding tubal mucosa and ovarian stroma. Omental fat was congested and showed granulomas. Antitubercular treatment (quadruple drug therapy: isoniazid, rifampicin, pyrazinamide, ethambutol for 9 months) was started. Three years follow up after surgery was uneventful.

Case 2

A 50 year old para 3 who attained menopause 2 years back, presented with abdominal distension since 2 months and loss of weight since 5 months. On examination, she was emaciated, with a BMI of 18.6 (weight-42 kg, height-146 cm). Mild pallor was present. Abdomen was distended with considerable ascites, no mass was palpable but liver appeared to be enlarged. Pelvic examination revealed moderate cystocele. Uterine size could not be gauged due to ascites. Hemoglobin was 10 g/dl and erythrocyte sedimentation rate of 16 mm/h. Renal and liver function tests were normal. Chest X-ray

showed minimal pleural effusion. CA-125 was 115 U/ml. Transabdominal sonography (TAS) showed marked ascites with right sided heteroechoic adnexal mass of 2.9 x 3 cm with septa of 5 mm. A septum was seen floating in the ascitic fluid and the left ovary was not visualized.

Uterine size was 8.5 x 4.2 cm. The endometrial thickness was 30 mm, an unusual finding in a postmenopausal woman (absence of bleeding). Bilateral mild hydronephrosis, suspected omental mass and hepatomegaly was present. (Fig. 2)

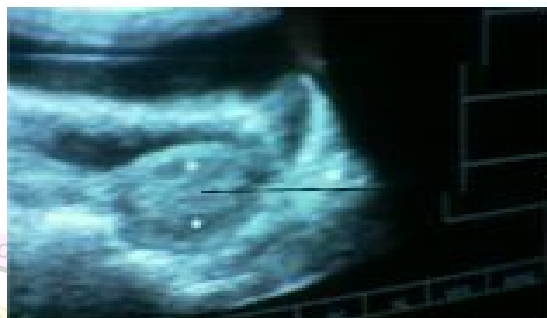


Fig. 2 TAS showing 30 mm endometrium

Abdominal paracentesis revealed few lymphocytes and no malignant cells or acid fast bacilli. The differential diagnosis was ovarian malignancy or abdominopelvic tuberculosis with the moving septum and thick endometrium favoring the latter. Computed tomography (CT) scan showed hepatomegaly, mild bilateral hydronephrosis and normal omentum similar to the pelvic and peritoneal findings as seen on ultrasound. As endometrium was markedly thickened, a fractional uterine curettage was done. Histopathology showed tuberculous cervicitis and scanty endometrial issue. (Fig. 3) Patient was started on antitubercular treatment.

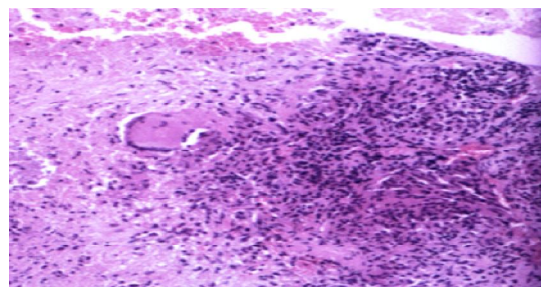


Fig. 3 Histopathology 10 X

Discussion

Resurgence of disease led WHO to declare tuberculosis a global emergency in the early 1990's. [3] Pelvic tuberculosis continues to be prevalent in India, and these case reports illustrate that in suspected ovarian cancer, alternative diagnosis warrants consideration. The incidence of extra pulmonary tuberculosis is almost 14% in developing countries. [4]

Our first case presented with nonspecific abdominal symptoms, cachexia, ascites and a complex fixed pelvic mass confirmed by ultrasound, suggesting a clinical picture of ovarian malignancy. However symptoms and signs of abdominopelvic tuberculosis can be nonspecific, similar to clinical presentation of ovarian carcinoma. Clinical picture such as infertility, family history of tuberculosis, low grade fever and hypomenorrhea, all of which indicated that pelvic tuberculosis could be the differential diagnosis.

Erythrocyte sedimentation rate was 40 mm/h with no lymphocytosis. Raised erythrocyte sedimentation rate may be found in both ovarian malignancy and pelvic tuberculosis and hence is not useful in differentiating the two conditions. Chest X ray can be helpful in such cases revealing an area of healed pulmonary tuberculosis which was not found in our case. Ultrasound features of these two conditions overlap with each other significantly and therefore can be quite misleading as in this case. [3] Intraoperative findings were highly suggestive of tuberculosis in our patient, frozen section examination was deemed not necessary and extensive pelvic clearance was withheld. The presence of large tuboovarian abscesses prompted total abdominal hysterectomy with bilateral salpingo-oophorectomy, although a 3-6 week preoperative antitubercular treatment would have been ideal. The second case was a postmenopausal woman who presented with abdominal distension and loss of weight. Sonographic findings suggested a right sided heterogeneous mass with Computed Tomography complementing the same.

Presence of a moving septum on real-time ultrasound; thick endometrium in the absence of postmenopausal bleeding and normal omentum on CT-scan, was in favor of abdomino-pelvic tuberculosis rather than ovarian malignancy. The mean age for pelvic tuberculosis is 33 years and it is unusual to find tuberculosis in women between 40-50 years. [5] Histopathology of endometrial curetting confirmed tuberculosis and surgery was avoided in this case,

CA-125 is a nonspecific marker of ovarian carcinoma and does not provide a basis for differentiating between malignancy and tuberculosis, since elevated levels are seen in both. [6, 7] The CA-125 levels were raised in both our cases. When pelvic tuberculosis is suspected other diagnostic tests that can be done are CT scan, tuberculin skin test and acid fast stain, but all of them can be negative or inconclusive. [8] Short of exploratory laparotomy there is no currently available non-invasive technique that accurately indicates whether a pelvic mass is benign or malignant.

Histopathology was clearly suggestive of tuberculosis in both cases. Ideally tissue must also be sent for acid fast staining, culture and sensitivity to confirm the diagnosis. As there was abdomino-pelvic involvement of tuberculosis in both our patients, probably it would have been wiser to send tissue for culture so that any bovine bacillus if present would have been isolated.

Abdomino-pelvic tuberculosis is common among young infertility women but quite rare in the 40-50 year old women. The idea of presenting these case reports is that whenever there is ovarian tumour with ascites, think about abdomino-pelvic tuberculosis as differential diagnosis for ovarian tumour which common in India. In the case reports presented above both mimicked ovarian malignancy, laparotomy was avoided in one case as endometrial curettage helped in making the diagnosis of tuberculosis and features suggestive of tuberculosis was discovered at laparotomy in the other.

Histopathology coupled with clinical awareness is very important in making a prompt diagnosis and avoids unnecessary surgery.

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