DISSEMINATED TUBERCULOSIS PRESENTINGAS TUBO-OVARIAN MASS

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ABSTRACT

Postmenopausal tuberculosis with the involvement of myometrium is rare. A 54 years old lady who presented with painful abdominal mass and urinary retention was diagnosed as a case of dissiminated tuberculosis involving myometrium and the adenexa.

Key Words: Disseminated tuberculosis, female genital tract, tubo-ovarian mass, myometrium.

INTRODUCTION

Genital tract tuberculosis (GTB) is a relatively common condition in developing countries,¹ particularly amongst communities where pulmonary or other forms of extragenital tuberculosis are prevalent.² The genital tract is usually infected by the haematogenous spread of tuberculosis from a distant focus, with the fallopian tubes most frequently involved. The ovaries, uterus, cervix and vagina are infected by direct extension in decreasing frequency. Reported rates of infection of the pelvic organs in GTB are: fallopian tubes 95-100%; uterus 50-60%; ovaries 20-30%; cervix 5-10%; and vagina 1-2%.

Diagnosis is made with the histology suggestive of granulomas.¹ We report a case of disseminated tuberculosis primarily presenting as tubo-ovarian mass involving the female genital tract, omentum and pelvic lymph node.

CASE-REPORT

A 54-year-old postmenopausal woman was admitted to the Gynecology ward of the B. P. K-oirala Institute of Health Sciences, Dharan, Nepal with acute pain in abdomen and retention of urine. The abdominal pain was diffuse, colicky and intermittent in nature and present for last two years. She had no relevant past medical or surgical history. There was no past history of tuberculosis and contact with a known case of tuberculosis. The family history was non-contributory. General examination revealed mild pallor. Per abdominal examination revealed a firm, non-tender, irregular mass with restricted mobility on the left side of abdomen measuring on 10x12 cm, giving a feel of fullness at left fomix during per vaginal examination. Investigations revealed haemoglobin of 7.5 gm/dl. The total and differential leucocyte counts were within normal limits. Ultrasonography of abdomen and pelvis showed an enlarged left ovary measuring 11.2 x5.7 cm. A clinical diagnosis of malignant ovarian tumour was considered. On laparotomy, there was marked adhesion of bowel loops with omentum. Multiple tubercles were found throughout the abdomen in the serosal aspects of bowel loops, omentum and liver along with matted lymph nodes. A total abdominal hysterectomy, bilateral salpingo-oopherectomy and omentectomy with mesenteric lymph node excision were performed because of the suspicion of ovarian malignancy. X-ray chest, Mantoux test and ESR were not done before operation.

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Gross examination

The uterus and cervix appeared unremarkable. On cutting open the uterus, endometrial cavity was found to be filled with necrotic material. A tubo-ovarian mass was found on the left side which measured 12x6x7cm. On serial sections the mass was partly cystic with areas of necrosis. Both fallopian tubes were enlarged and engorged. No lumen could be identified. The ovary of the right side was unremarkable. Widespread miliary deposits were seen over the entire omental tissue.

Microscopic findings

Multiple sections examined from the thickened endometrium showed florid granulomatous reaction with multiple giant cells of Langhans type and areas of caseous necrosis (Fig. 1a). Epithelioid cell granulomas were also present within myometrium (Fig. 1b) and within the cervical stroma. Section from left fallopian tube showed florid necrotizing granulomatous inflammation and large areas of caseous necrosis causing considerable distortion of architecture. Granulomas were also present throughout the thickness of the tubal wall and also on the serosal surface. Left ovary showed a dense neutrophilic infiltrate, large areas of necrosis, fibrosis, and few epithelioid cell granulomas in the ovarian stroma (Fig. 2). Omental tissue (Fig. 3) and mesenteric lymph node also showed epithelioid cell granulomas and areas of necrosis. Acid-fast bacilli were demonstrated only on the ovarian tissue. Sections from the right ovary and tube were within normal limit.

Investigations after diagnosis of disseminated tuberculosis revealed a positive mantoux test and negative culture of urine for acid fast bacilli. Chest X-ray showed mild cardiomegaly with hilar opacities. Sputum for acid-fast bacilli was positive. She was put on anti-tuberculous drugs. She was asymptomatic on follow up after anti-tuberculous therapy.

DISCUSSION

The incidence of GTB varies from 1-19%.^{1,2} It is uncommon in developing countries where early diagnosis is often due to

their presentation to fertility clinics.^{1,3} The reverse seems to be true in developing countries, where most cases of GTB tend to occur in older age groups.¹

The genital tract is usually infected from a focus elsewhere in the body, usually the lung. Dissemination occurs by haematogenous spread, by lymphatic spread and rarely by direct local extension. The fallopian tubes are the most common sites for genital tuberculosis. The ovaries, uterus, cervix and vagina are in decreasing order by direct extension.^{1,2,4} After menopause, tuberculosis of the endoroetrium is rare. Usual presentation are leucorrhoea and abnormal bleeding.^{2,5} This patient was postmenopausal but presented with abdominal mass pain and retention of urine.

Myometrium involvement by tuberculosis is seen in advanced cases and in patients above 70 years of age.⁴ This patient was only 58 years and showed involvement of myometrium. The reason for the infrequent involvement of the myometrium to tuberculosis is not well known but presence of adenomyosis has been proposed as a possible mechanism.^{4,6} In the present case, adenomyosis was not documented.

Tuberculosis of the endometrium is rare after menopause possibly because of decreased vaseularhy of the tissue.³ A higher incidence (62.5%) of ovarian tuberculosis is found typically in the form of a tubo-ovarian mass. This usually secondary to tubal disease, but rarely results from haematogenous spread.⁴ The macroscopic appearance of tuberculous salpingitis is non-specific. The diagnosis of GTB is usually not suspected until microscopic examination of specimen reveals epithelioid cell granuloma. Investigation involves confirmation of the diagnosis and exclusion of systemic disease.^{13,7}

This is universal agreement that the tubercle bacilli (AFB) are very rarely found in endometrial and cervical granulomas even with the use of fluorescent techniques.⁴ In this case acid

fast bacilli were demonstrated only in the ovaries. Though culture for AFB can be done in suspected cases, a positive culture is not essential for the diagnosis. Use of polymerase chain reaction (PCR) for rapid diagnosis could be a promising future approach in cases of GTB where AFB are usually not demonstrated.⁴

Medical management remains the mainstay in GTB, which involves combination of antituberculous chemotherapy. Complete physical and mental rest, proper nutrition, dietary supplements and careful personal hygiene are also important.^{1,4,8} This patient was commenced on combination antituberculous therapy and she responded well.

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