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Case Report

Asymptomatic postmenopausal endometrial tuberculosis: a rare case report

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ABSTRACT

Tuberculosis remains a global health problem, primarily in developing countries. Genital tuberculosis is common in young women mostly detected during infertility work up. Mycobacterial infection in postmenopausal women is an extremely rare disease. After menopause, tuberculosis of the endometrium is a rare possibility probably because of the decreased vascularity of the tissues. We present here a case of asymptomatic postmenopausal woman who was suspected as endometrial carcinoma initially by abnormal endometrial pattern in ultrasound done as a part of regular health check-up. In endometrial biopsy we found pus draining. Diagnosed as endometrial tuberculosis by pathologic examination and polymerase chain reaction. She was put on anti-tuberculosis treatment. After completion of treatment, she was doing well. Thus, we conclude saying endometrial tuberculosis should also be suspected in postmenopausal women with abnormal endometrial pattern.

Keywords: Asymptomatic, Endometrial tuberculosis, Postmenopausal tuberculosis

INTRODUCTION

Tuberculosis is an infectious and communicable disease caused by *Mycobacterium tuberculosis*. In 1744 Morgagni described the first case of genital TB following a post-mortem examination of a 20-year-old woman who died of TB whose uterus and fallopian tubes were filled with caseous material. The word tuberculosis was first used in 1834, although Koch did not discover the t*ubercle bacilli* until 1882. Tuberculosis predominantly affects lungs, but can also affect other parts of body.

One fifth of global cases of tuberculosis occurs in India.[1] In 2015, there were an estimated 10.4 million new TB cases worldwide, of which 3.5 million (34%) were women and 1.2 million (11%) of all new TB cases are associated with HIV. India brunts with new cases along with countries like Indonesia, China, Nigeria, Pakistan and South Africa.[2] In developing countries, incidence is 15-19% but in USA, Australia and western European countries the incidence is less than 1%.[4,5]

Tuberculosis (TB) of the genital tract is almost invariably secondary to pulmonary tuberculosis. It occurs in 10% of pulmonary tuberculosis case.[6] Genital tract TB is a chronic disease that is mostly asymptomatic and rarely presents with low grade symptoms thus they go undiagnosed easily.

Presenting symptoms are generally varied infertility being the most frequent clinical presentation (43-74%). Other clinical presentations include oligomenorrhoea (54%), amenorrhoea (14%), menorrhagia (19%), abdominal pain (42.5%), dyspareunia (5-12%) and dysmenorrhoea (12-30%).[1]

Although most of the affected belong to reproductive age group, the disease has also been reported in

postmenopausal women. Postmenopausal tuberculosis usually presents with abnormal vaginal bleeding.[6,7] Here we present a case of asymptomatic postmenopausal women who came with ultrasound showing endometrial collection, diagnosed as endometrial tuberculosis.

Histopathological evidence of *tubercle bacilli* in cultures of menstrual blood or endometrial curetting is necessary to provide a conclusive diagnosis of the disease. The disease is also confounded by imaging, laparoscopy, serological and bacteriological tests. Caseous granulomatous lesions with giant epithelioid cells are highly suggestive of TB but are not diagnostic, as these also appear in fungal infections and sarcoidosis. PCR is a rapid, sensitive and specific method applied in the laboratories to diagnose disease. PCR based diagnosis of TB has been evaluated to be useful and important in the detection of pulmonary as well as extrapulmonary tuberculosis.

CASE REPORT

48-year-old women, post menopause for 6 years P1L1 previous LSCS, LCB-4 years has done routine health checkup. As the ultrasound report showed abnormal endometrial collection she was referred to Gynecology Department for further management.

Patient was asymptomatic, no history of foul smelling discharge, pain abdomen, fever, loss of weight, loss of appetite, or postcoital bleeding. No significant medical history. She had no personal or family history of gynecological or other malignancy. No history of oral contraceptives or hormone replacement therapy. General, physical and systemic examination detected no abnormality. On per speculum examination vagina and cervix was healthy, no discharge. PAP smear was taken.

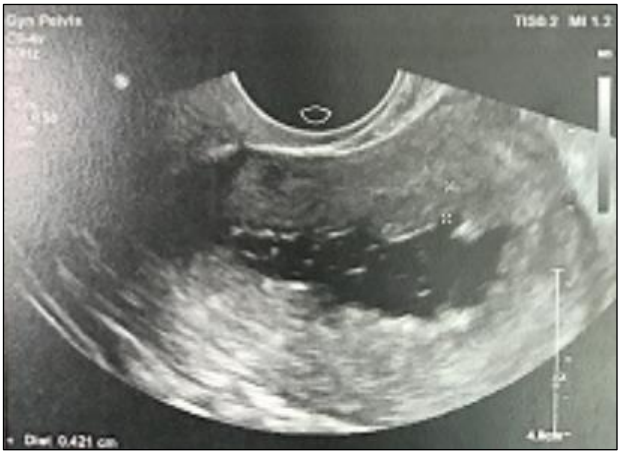

Figure 1: Ultrasound showing Endometrial collection

USG report showed bulky uterus 9.2 × 4.7 × 4.9 cm and endometrial collection with few internal band like septations, measuring 4.3 × 2.8 × 5.4 cm, volume, 5.4ml. The inner endometrial lining appeared irregular and highly echogenic suggestive of calcification along the endo lining, multiple floating echoes with posterior comet tail artefacts was noted within the fluid. The fluid was seen extending into the anterior myometrium at the region of previous LSCS scar, suspicious of scar dehiscence, chronic endometritis/prior D and C sequalae/chronic hematometra, widened endometrial stripe for present menopausal status, both ovaries and adnexa normal.

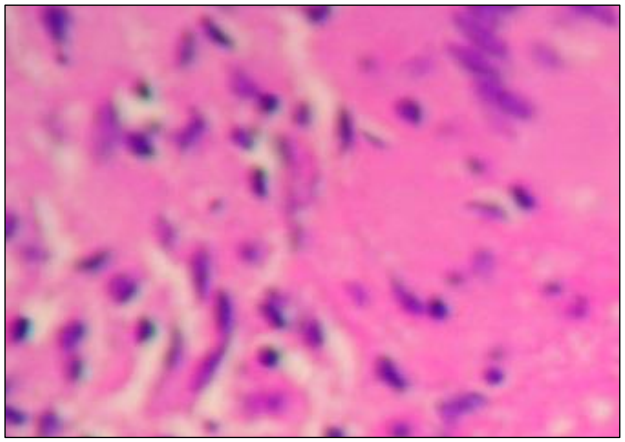

Figure 2: Microscopic view of multinucleate gaint cells.

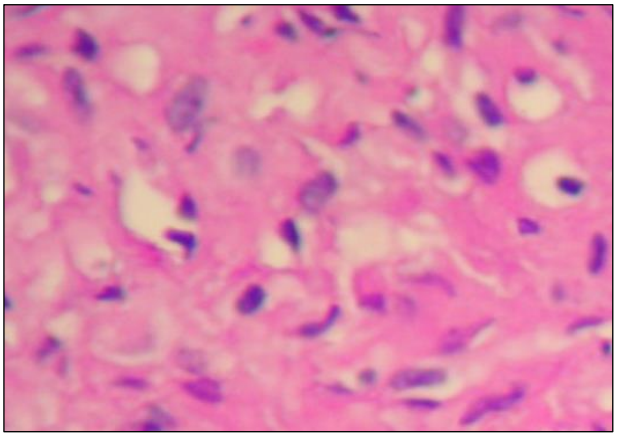

Figure 3: Microscopic view showing granuloma with langhans gaint cells

In view of abnormal endometrial findings, endometrial biopsy was planned. All hematological and biochemical investigations were normal. The patient's hepatitis and HIV status were negative. Blood sugars and thyroid function tests were within normal limits. PAP smear negative for intraepithelial lesion or malignancy. ECG sinus rhythm, X-ray chest and Mammogram normal.

Under general anesthesia endometrial biopsy was done with USG guidance, UCL 4 inches, bulky uterus, collection present. During dilatation pus drained, not foul smelling. Pus sent for culture sensitivity and PCR for

AFB. Endometrial curettage done, tissue was friable suspicious of malignancy and sent for histopathological examination.

PCR for mycobacterium tuberculosis genome by nested primers detected IS6110 region positive. PCR for *mycobacterium tuberculosis* genome by nested primers detected MPB64 gene negative. Histopathology of endometrial biopsy showed numerous granulomas composed of epithelioid histocytes and Langhan's and foreign body multinucleate giant cell.

Special stains for AFB and fungus negative, culture and sensitivity showed no growth in pus swab. Patient was treated with Anti tuberculosis treatment for 6 months. USG screening after 6 months showed thin endometrium with normal ovaries and no collection in endometrial cavity

DISCUSSION

According to the World Health Organization, it is estimated that there were 1.4 million TB deaths in 2015 and 0.4 million deaths in TB cases associated with HIV.[2] Although pulmonary TB is the primary and the most common presentation of tuberculosis in India, there are cases of extra pulmonary TB reported annually. Tuberculosis primarily affects the lungs, but about one third of the patients also have involvement of extrapulmonary organs such as the meninges, bones, skin, joints, genitourinary tract, and abdominal cavity.[8,9]

The fallopian tubes are affected in almost 100% of the cases followed by the endometrium in 50%, ovaries in 20%, cervix in 5%, and vagina and vulva in <1%.[10,11] Patients with genital tuberculosis are usually young women diagnosed during infertility work up. Genital tuberculosis is rare in postmenopausal women and responsible for only approximately 1% of postmenopausal bleeding, if symptomatic. Many authors explain the low incidence of this disease in post-menopausal age, assessing that atrophic endometrium represents a poor ground for mycobacterial growth.

Postmenopausal tuberculosis of the endometrium is not a common condition. It usually presents with abnormal vaginal bleeding, but it may also present without specific symptoms as in our index case which is why there's usually a delay in diagnosis and in therapeutic interventions.[7] In our case Ultrasound showed irregular, thick endometrium with collection suspicious of endometrial cancer with pyometra.

Differential diagnosis are endometrial polyps (12%), endometrial cancer (10%), pyometra (13.6%), endometrial hyperplasia, hormonal response, cervical cancer, other infections.[12-14]

Saracoglu and colleagues found that more than 75% of patients with genital TB had a normal chest X-ray film.[15] The Mantoux test (tuberculin skin test) showed a sensitivity of 55% with a specificity of 80% in female genital TB. In certain cases, adnexal mass, thickened omentum, fluid in the pelvic cavity, and adhesions have been demonstrated on pelvic ultrasound. In our case all were normal except abnormal endometrial findings in USG.

Definitive diagnosis requires the identification of *Mycobacterium tuberculosis* either by direct microscopic examination or by culturing pathological specimens. Molecular testing, with polymerase chain reaction and DNA hybridization, has been used in the presumptive diagnosis of genital TB.[16] The typical lesions in genital TB are epithelioid cell granulomas with or without Langerhans giant cells. Caseation necrosis is rare and tends to be a late feature.[15] In the present case PCR was positive and HPE showed typical picture of endometrial tuberculosis.

Treatment guidelines recommend 6 months of treatment for female genital TB, providing that pyrazinamide is included for the first 2 months of treatment and that the organism is susceptible.[17] Surgery should be done if there is persistence of pelvic mass and recurrence of pain or bleeding and should be performed at least 6 weeks after initiation of anti-TB therapy, because antimicrobial treatment facilitates the surgical procedure and reduces the risk of perioperative complications. In the present case after 6 months of anti-tuberculous treatment, lesion resolved completely with normal USG findings.

CONCLUSION

Tubercular endometritis is a rare condition that rarely occurs in post-menopausal woman and usually not suspected as they are very rare and symptomatic. As diagnosis is difficult it may require D and C, histopathology and PCR for tuberculosis confirmation. A standard anti-tubercular therapy of 6 months is considered adequate to obtain a complete therapeutic response, however in some cases a surgical approach may be necessary. Follow up should be done to rule out the progression of the pathology by imaging studies. This paper shows that postmenopausal tubercular endometritis may be asymptomatic. Though not a common condition, it should always be considered in differential diagnosis of abnormal endometrial pattern in postmenopausal women.

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REFERENCES

1. Gatongi DK, Gitau G, Kay V, Ngwenya S, Lafong C, Hasan A. Female genital tract tuberculosis. Obstet Gynaecol 2005;7:75-9.
2. WHO. WHO guideline 2015 for Tuberculosis. Available at

http://www.who.int/tb/publications/global_report/gtbr2016_executive_summary.pdf?ua=1. Acessed 06 Sep 2017
3. Aabebe M, Lakew M, Kidane D, Lakew Z, Kiros K. Female genital tuberculosis in Ethiopia. Int J Gynaecol Obstet. 2004;84:241-6.
4. Punnonen R, Kiilholma P, Meurman L. Female genital tuberculosisi and consequent infertility. Int J Fertil. 1983;28:235-8.
5. Schaefer G. Female genital tuberculosis. Clin Obstet Gynecol. 1976;19:223-9.
6. Mantovani A, Pelagalli M, Bracalenti C, Pierandrei G. Postmenopausal endometrial tuberculosis: a clinical case. Minerva Ginecologica. 1998;50(3):93-6.
7. Sharma JB, Roy KK, Pushparaj M, Gupta N, Jain SK, Malhotra N. Genital tuberculosis: an important cause of Asherman's syndrome in India. Arch Gynecol Obstet. 2008;277:3741.
8. Dye C, Scheele S, Dolin P, Pathania V, Raviglione MC. Global burden of tuberculosis: estimated incidence, prevalence, and mortality by country. J Am Med Assoc. 1999;282(7):677-86.
9. Akhanand O, Pringot J. Imaging of abdominal tuberculosis. Eu Radiol. 2002;12(2):312-23.
10. Chow TWP, Lim BK, Vallipuram S. The masquerades of female pelvic tuberculosis: case reports and review of literature on clinical presentations and diagnosis. J Obstet Gynaecol Res. 2002;28(4):203-10.
11. Antonucci G, Girardi E, Raviglione MC, Ippolito G. Risk factors for tuberculosis in HIV-infected persons: a prospective cohort study. J Am Med Assoc. 1995;274(2):143-8.
12. Sutherland AM. Surgical treatment of tuberculosis of the female genital tract. Br J Obstet Gynaecol. 1980;87:610-2.
13. Karlsson B, Granberg G, Wikland M, Ylöstalo P, Torvid K, Marsal K. Transvaginal ultrasonography of endometrium in women with postmenopausal bleeding: a Nordic multicentric study. Am J Obstet Gynecol. 1995;172:1488-94.
14. Sharma N, Singh AS, Bhaphiralyne WJ. Spontaneous perforation of pyometra. Menopausal Med. 2016;22:47-9.
15. Saracoglu OF, Mungan T, Tanzer F. Pelvic tuberculosis. Int J Gynecol Obstet. 1992;37(2):115-20.
16. Raut VS, Mahashur AA, Sheth SS. The Mantoux test in the diagnosis of genital tuberculosis in women. Int J Gynecol Obstet. 2001;72(2):165-9.
17. Blumberg H, Burman WJ, Chaisson RE, Daley CL, Etkind SC, Friedman LN, et al. American Thoracic Society/Centers for Disease Control and Prevention/Infectious Diseases Society of America: treatment of tuberculosis. Am J Respiratory Critical Care Med. 2003;167(4):603.

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