Case Report

Tuberculous endometritis in a post menopausal woman: A case report

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Abstract

Tuberculosis is one of the most important disease in the history of humanity and remains an extra ordinary burden to human health today. It is the second most common infectious disease of adult mortality. Genital TB is responsible for a significant proportion of females presenting with infertility. Female genital TB is typically understood as a disease of young women, with 80% to 90% of cases diagnosed in patients 20–40 years old.

Keywords: Tuberculosis (TB), endometrium, granulomas, caseation necrosis.

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INTRODUCTION

Tuberculosis is the most important communicable disease in the world. The incidence of TB in general and genital TB more particularly has been steadily declining in developed countries but TB remains a major health problem in many developing countries. 9.3 million new cases of active disease and 1.7 million deaths were attributed to tuberculosis in 2007[1,2]. 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. About 9 per cent of all extrapulmonary tuberculosis cases are genital tract TB[3]. Genital TB is mostly a secondary manifestation of primary TB, the most common primary site being the lungs[3]. Haematogenous spread represents about 90% of cases, with the primary focus being the lungs, lymph nodes or skeletal system. Direct spread of infection from the gastrointestinal tract, mesenteric nodes or the peritoneum is also possible[4,5] Ascending spread of infection from the vagina, cervix and the vulva may occur[5]. Genital tract is vulnerable to this disease after puberty, and most cases occur during the childbearing period. 80% to 90% of cases diagnosed in patients 20–40 years old, during workup for infertility[6,7] In postmenopausal women the incidence of tuberculous endometritis is rare probably due to atrophic endometrium which is not a suitable media for the growth of mycobacterium[8]. We present a case of tuberculous endometritis in a post menopausal woman who present with prolapse uterus.

CASE REPORT

65 years old female admitted in our institution with a complaint of mass descending per vagina. P2 L2 who had regular menstrual cycles and attained menopause fifteen years back. Routine blood investigation, x-ray chest and ECG show normal limits. ESR was 47mm per hour. Ultrasound abdomen showed hypoechogenicity of endometrium and elongated cervix. She was diagnosed as III degree UV prolapse with cystocele. She underwent vaginal hysterectomy with pelvic floor repair.

Gross

Specimen of uterus with cervix (Figure 1) received measures 6 x 3 x 1 cm. uterus appears atrophic. Cut section endometrium is 7 mm thickness with necrotic material in the cavity. Cervix appears hypertrophied and keratotic.

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Histopathology

Sections from endometrium show endometrial glands lined by flattened cuboidal epithelium. The stroma shows dense lymphocytic infiltrate and multiple, caseating epithlioid cell granulomas with Langhan type giant cells surrounded by lymphocytes (Figure 2,3). At some places the whole endometrium is replaced by caseation necrosis (Figure 4). Myometrium show atrophic changes. Cervix show features of chronic cervicitis. PCR was performed on the formalin fixed tissue for the diagnosis of tuberculosis and was positive in this case for mycobacterium tubercle bacilli.

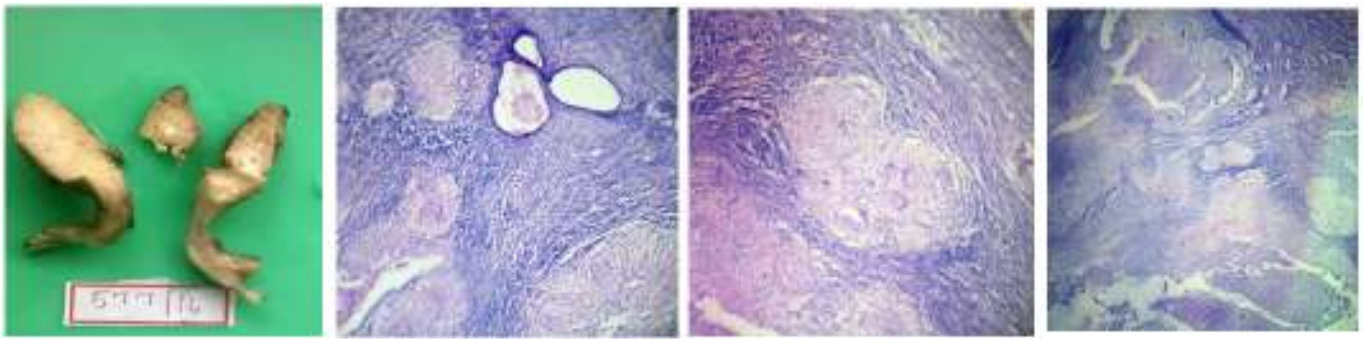

Figure 1: Atrophic uterus with cervix
Figure 2: Atrophic endometrial glands Endometrium show necrotic material surrounded by granulomas (H andE × 100)
Figure 3: Granuloma composed of Langhan
Figure 4: Endometrium replaced by caseation type giant cells (H andE × 400) necrosis (Hand E × 100)

DISCUSSION

Female genital tuberculosis occurs after puberty, and most cases are seen in the childbearing period. 80% to 90% of cases diagnosed in patients 20–40 years old, during workup for infertility. Postmenopausal women account for 7–11% of cases of genital TB. More recent reports from Sweden and Scotland suggest a trend toward presentation in women in their 40s to 50s.[9,10] Fallopian tube is the commonest site affected with a frequency of 90-100%. Endometrium accounts for 50-60%, ovaries 20-30%, cervix 5-15% and vulva, vagina 1% of cases[11]. Tubeculous endometritis is invariably associated with tuberculous salphingitis except in postmenopausal women[12]. Genital tract TB is a chronic disease that often presents with low grade symptomatology or asymptomatic. Infertility is the most frequent clinical presentation (43-74%) followed by oligomenorrhoea (54%), amenorrhoea (14%), menorrhagia (19%), abdominal pain (42.5%), dyspareunia (5-12%) and dysmenorrhoea (12-30%)[4]. In post menopausal women tuberculous endometritis may present with post menopausal bleeding (1%), persistent leucorrhea or pyometra. In menopausal women, genital TB present as an enlarged uterus that is tense and tender on examination with pyometra formation[13,14]. Physical examination may suggest ovarian malignancy. Rupture of a tuberculous pyosalpinx into adjacent organs may present with a fistulous tract between the genital tract and the bowel, bladder, or cutaneous area. Less common findings include lesions of the cervix and external genitalia. Grossly, the size and shape of the uterus may appear normal. The tuberculous process generally is localized to the endometrium, is most extensive in the fundus, and decreases toward the cervix. The myometrium is not usually involved. Endometrial involvement may result in an endometrial ulcer or accumulation of caseous material to form pyometra. Intrauterine adhesions and partial obliteration of the uterine cavity may also occur. The classic lesion in tuberculous endometritis is the noncaseating granuloma, composed of epithelioid cells, Langhans giant cells, and lymphocytes. These granulomata are located throughout the endometrium with a greater density in the more superficial layers. They occasionally perforate into gland lumina, causing an acute inflammatory reaction and giving the appearance of microabscesses. Sarcoidosis also cause noncaseating epithelioid cell granulomas but it will extend into the myometrium15. Endometrial glands adjacent to granulomata may not reveal a secretory response or may become compressed, resulting in a pseudoadenomatous appearance.16 Advanced stages of tuberculosis such as caseation, fibrosis, and calcification are rarely seen during the reproductive period because of the regular cyclical shedding of the endometrium. Endometrial tuberculous lesions are frequently focal and immature because they tend to be shed monthly except in postmenopausal women or women with amenorrhea. Sutherland stated that the endometrium is reinfected on a regular basis from the tubes or from infections of the basalis by organisms in menstrual blood after sloughing of the superficial endometrium.[18] The granulomatous lesions are usually best recognized on cycle days 24–26 or within 12 hours

of the onset of menses. To diagnose tuberculosis of endometrium, the endometrial aspiration biopsy material are stained by fluorescent auramine-phenol and Ziehl-Neelsen. Löwenstein-Jensen culture medium, can give positive results for *M. tuberculosis* in 4 weeks. Liquid culture with radiometric growth detection such as BACTEC-460 or nonradiometric (CO2) growth detection such as BacTAlert 3D, provides more rapid growth. Rapid nucleic acid amplification techniques such as polymerase chain reaction (PCR) allow direct identification of *M. tuberculosis* in clinical specimens. PCR can detect fewer than ten organisms compared with 10 000 necessary for smear positivity. As endometrial TB is paucibacillary type, PCR has more diagnostic accuracy than any other methods.

CONCLUSION

Chronic endometritis rarely show the etiologic agents. Tuberculosis manifests as granulomatous endometritis. Fungi, schistosomiasis pinworm and toxoplasma can also present as granulomatous endometritis. Hysteroscopic ablation of endometrium in postmenopausal women also present with granulomatous endometritis. Genital TB should be considered in postmenopausal women with pyometra and persistent vaginal discharge. In most cases, the lesions are extremely scanty, and careful search through all the sections of the endometrium removed at curettage may reveal only one or two foci of TB. Confirmation of tuberculosis by PCR will be diagnostic and early confirmation of the lesion.

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