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OVARIAN CYST REVEALING ENDOMETRIAL TUBERCULOSIS – A CASE REPORT

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ABSTRACT
Pulmonary Tuberculosis (TB) is the primary and most common presentation, but extra-pulmonary tuberculosis has shown an increase in developing countries like India even after years of Revised National Tuberculosis Control Programme (RNTCP). Female genital tract is one of the commonest types of extra pulmonary tuberculosis and clinically, infertility is the most common presentation.In this case, a 25 year old female presented with chief complaints of pain in abdomen insidious in onset continuous dragging in nature, dysuria, fever since 3 days and complained of infertility since 2 years. Computed tomographyscan of abdomen revealed an impression of right ovarian complex cyst. Laparotomy was done and the postoperative histopathological examination shows proliferative phase with numerous caseations granuloma- tuberculous endometritis. Hence, methods like eliciting clinical data, endometrial histopathology, and culture of acid fast bacillus, along with Polymerase Chain Reaction assays are considered to be the best available modalities for diagnosis of tuberculosis in infertility at early stage.

KEYWORDS: Ovarian cyst, endometrial tuberculosis, Infertility.

INTRODUCTION
Tuberculosis remains a major public health problem worldwide and is of most concern in developing countries (WHO, 2007).[1]

There were an estimated 9.2 million new cases and 1.7 million deaths from TB in 2008 worldwide.[2]

Pulmonary Tuberculosis (TB) is the primary and most common presentation, but extra-pulmonary tuberculosis has shown an increase in developing countries like India even after years of Revised National Tuberculosis Control Programme (RNTCP).[3]

Morgani was the first to describe genital tuberculosis in the mid-eighteenth century and tuberculous bacillus was discovered in 1882 by Koch. Female genital TB is a rare disease in some developed countries, but it is a frequent cause of chronic pelvic inflammatory disease (PID) and infertility in other parts of the world.[4]

Female genital tract is one of the commonest type of extra pulmonary tuberculosis and clinically, infertility is the most common presentation.

Steinsickin first reported on the relation of endometrial tuberculosis and sterility and later on Klein (1976) and Munshi (1993), explained precisely the association of tuberculous endometritis and infertility. Schaefer in his autopsy findings revealed that 4-12% of women who died from pulmonary tuberculosis have evidence of genital tuberculosis.Tuberculous endometritis is far more common in India compared to developed countries like USA and UK and these patients usually present with infertility.[5]

It is estimated that 5-13 percent of females presenting in infertility clinics in India have genital TB and majority are in age group of 20-40 years. Genital TB frequently presents without symptoms and diagnosis requires a high index of suspicion. It is estimated that at least 11% of patients lack symptoms. The typical presentation of genital TB includes pelvic pain, menstrual irregularity, general malaise and infertility.[6]

Genital tuberculosis usually spread to genital site from three routes, including hematogenous, lymphatic or adjacent viscera, while it most commonly affects the fallopian tubes (95-100%), followed by the endometrium (50-60%), ovaries (20-30%), cervix (5-15%), and vulva/vagina (1%) and the myometrium (2.5%).[7]

CASE REPORT
A nulliparous woman, aged 25 years, presented to the hospital with chief complaint of pain in abdomen insidious in onset continuous dragging in nature. She had complaints of dysuria and fever since 3 days associated with chills and rigour and which was subsided later. She was also complaining of infertility since 2 years for which she took herbal medication for 3months.
On examination: Patient was found to be conscious, coherent afebrile. On systemic examination pulse rate

was 86beats/min, B.P.was 100/60mmHg, all other organ systems were normal.

Menstrual history: Hypomenorrhae 1/28days since 2months.

Laboratory findings

CBP shows haemoglobin 10.5g (12-14 g/dl). Liver and kidney function test were normal. Ultra sound scan of abdomen shows symptoms of complex ovarian cyst most likely endometrial cyst. Computed tomographyscan of abdomen shows impression of right ovarian complex cyst serous cyst adenoma, right mild hydrouretonephrosis and mild ascites.

Treatment

Laparotomy (hysterectomy + salpingoopherectomy) was done and the postoperativehistopathological examination shows proliferative phase with numerous caseating granuloma- tuberculous endometritis. Anti-tubercular treatment (category 1) was given to the patient according to RNTCP guideline.

The patient was discharged with ATT category1: 2(H3 R3 Z3 E3) 4 (H3R3) H= INH 600mg, R=Rifampicin450mg, Z=Pyrazinamide1500mg, E=Ethambutol 1200mg, T. Premerin (conjugated estrogen) 0.625mg OD, vitamin B, C and calcium.

DISCUSSION

Genital tuberculosis (TB) predominantly affects individuals below 40 years of age and peak age frequency ranges between 21 to 30 years of age. In developing countries like India Genital tract tuberculosis is identified as an important cause of infertility.[8] It has been estimated that approximately 5% of females presenting to infertility clinics worldwide have genital TB.[9]

More than 5.8 million new cases of all forms of TB were reported to the World Health Organization in 2009. About 95% of the cases were reported from the developing countries. In order of frequency, the extra pulmonary sites, most commonly involved in TB are the lymph nodes, pleura, genitourinary tract, bones, joints, meninges, peritoneum, and pericardium. In HIV-infected patients, extra pulmonary TB is more common due to hematogenous dissemination [10].

Endometrial tuberculosis often goes undiagnosed because it is either asymptomatic or presents with non-specific symptoms. In women of reproductive age, the most common presenting symptoms are menstrual disturbance, oligo-amenorrhea or pelvic pain. Hysteroscopy can allow visualisation of granulomas in cases of noncaseating granulomatous endometritis. Biopsy of such lesions is mandatory to get histological confirmation of the typical non-caseating lesion consistent with tuberculosis. Standard anti-tuberculous drugs are used to treat genital tuberculosis. A four-drug regimen consisting of isoniazid, ethambutol, rifampicin and pyrazinamide is used for the first two months, followed by triple or dual therapy. The total duration of treatment should be six months to a year.[11]

In tuberculosis, infertility is due to functionally altered endometrium or associated with tuberculous salphingitis and this infection greatly suppresses the sensitivity of the endometrium to ovarian hormones which leads to deficient secretory phase with defective secretion of glycogen and also altering the implantation of embryo.[5]

It is important to prevent the transmission of endometrial TB by all possible routes, including sexual transmission.[12]

It is important to note that if after treatment a patient conceives, there is an increased chance of an ectopic pregnancy as a consequence of chronic salphingitis and tubal damage. If pregnancy progresses, pre-term labour and abnormal placentation are possible complications. Importantly, timely therapy at an early stage of genital tuberculosis typically completely resolves the disease, resulting in successful pregnancy. In vitro fertilization with embryo transfer remains the most effective method of treatment associated with infertility.[13]

CONCLUSION

The incidence of genital tuberculosis has been increased during the past two decades, the clinicians increasingly faced cases of genital TB and its consequences such as infertility.

This case has been highlighted need for considering the possibility of genital tuberculosis in etiology of infertility. Laparotomy (hysterectomy + salpingoopherectomy) was done as there was increased risk of ectopic pregnancy and other complications.

Physicians should consider methods like eliciting clinical data, endometrial histopathology along with Polymerase Chain Reaction assays, as these are the best available modalities for diagnosis of tuberculosis in infertility at early stage.

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