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Extended Abstract
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Genital Tuberculosis Masquerading Cervical Carcinoma

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Tuberculosis is a chronic bacterial infection that primarily results in pulmonary disease. Although there are several reported extrapulmonary tuberculosis cases, very few reports have described this disease in the female genital tract. Case: Presented is an unsuspected case of a 42-year-old G2 P2 (2002) who presented with amenorrhea for 2 years duration associated with copious non-foul smelling yellowish vaginal secretions and post-coital vaginal spotting. Speculum examination revealed an abnormal looking cervix which exhibited an irregular friable growth that easily bled on touch. The ectocervix and part of the endocervix were covered with serosanguinous discharge. Bimanual pelvic examination revealed non-tender cervical mass measuring 4x3 centimeters and a normal-sized, anteverted mobile uterus. The adnexa was unremarkable and bilateral fornices were free. On the rectovaginal examination, both parametria were nodular, and rectal mucosa was smooth and freely mobile. Clinically, cervical cancer was suspected. However, on cervical punch biopsy, histopathologic findings revealed tuberculosis of the cervix. The patient was treated as a case of extrapulmonary TB and was given with Isoniazid 300mg, Rifampicin 450mg, Pyrazinamide 1500mg and Ethambutol 800mg for two months followed by a continuous phase with Isoniazid and Rifampicin for four months. Discussion: Tuberculosis is associated with a significant inflammatory reaction, which may mimic a gynecologic malignancy on physical or diagnostic imaging. Despite the rare incidence, tuberculosis of the cervix should be considered in the differential diagnosis when cervical carcinoma is initially suspected. Tuberculosis (TB) is a major public health problem around the world despite a declining trend in mortality, with effective diagnosis and treatment. An estimated 10.4 million people developed tuberculosis in 2015 and more than half of tuberculosis cases (60%) were observed in the regions of Southeast Asia and the Western Pacific1. About 60 percent of tuberculosis cases and deaths occur in men, but the disease burden is also high in women1. In 2015, nearly 500,000 women died of tuberculosis, and of these, 28% were co-infected with the human immunodeficiency virus (HIV) 1. Genital TB in women is well recognized as an important etiologic factor of infertility in countries with high TB prevalence. Genital tuberculosis is usually secondary to tuberculosis in other sites (mainly the lungs). The spread is usually by the hematogenous or lymphatic route2. Tuberculosis infection of the female genitalia can lead to infertility, dyspareunia, menstrual irregularities, and chronic pelvic inflammatory disease (PID) 3. Drug treatment for female genital TB (FGTB) is similar to the standard treatment regimens used for pulmonary TB. In infertile patients, the rate of conception is not very encouraging after anti-tuberculosis treatment (ATT) 2. Here we review the epidemiology, clinical presentations, recent advances in the diagnosis and treatment of FGTB. Genitourinary TB is a common form of extrapulmonary TB (EPTB) worldwide (27%), with genital TB alone accounting for 9% of all TBEP4 cases. However, the burden of genital TB in women is underestimated because most patients are asymptomatic and usually diagnosed during the assessment of infertility. A study of FGTB in infertile patients in India showed an incidence of 3 to 16 percent5. Higher rates have been reported in tertiary referral hospitals in India, possibly due to referrals from different parts of the country for diagnosis and management of difficult and complicated cases. A study of infertile women registered for in vitro fertilization in northern India reported that the prevalence of genital tuberculosis in patients with tubal infertility was 48.5% 7. A survey conducted by the Indian Council of Medical Research (ICMR) indicated that the prevalence of FGTB in India increased from 19% in 2011 to 30% in 2015. A multicentre study team from ICMR is working on it. development of a nationally applicable algorithm for the diagnosis and management of FGTB8. The existing literature on the prevalence of genital TB in infertile women and rates of conception.

Genital tuberculosis is mainly secondary to pulmonary tuberculosis or to extrapulmonary foci such as the kidneys, meninges, skeletal system and gastrointestinal system. Tuberculosis bacilli infect the genital tract by four routes - hematogenous (with the lungs as the common primary focus), direct downward spread, lymphatic spread, and rarely as a primary infection of the genitals

through sexual transmission5. The genitals affected by Mycobacterium tuberculosis (in decreasing order of frequency) are: fallopian tubes (95-100%), uterine endometrium (50-60%), ovaries (20-30%), cervix (5-15 %), uterine myometrium (2.5%) and vagina / vulva (1%) 16. The morphology of genitals infected with tuberculosis varies considerably. The organs appear normal in the early stages. The ampullary region of the fallopian tubes shows the first changes, and the fimbrial processes become swollen later. Tuberculous endometritis is often focal, and pathological changes such as ulceration, caseous necrosis, and hemorrhage are seen in advanced endometrial TB. In later stages, adhesions can occur between the ovaries and adjacent pelvic organs, resulting in an adnexal mass. Intrauterine adhesions, if they occur, can lead to partial obliteration of the uterine cavity. The cervix, vulva and vagina are rarely affected The discovery of tuberculosis bacilli in 1882 and the isolation of the bacilli from urine and sputum samples in 1883 greatly contributed to the diagnosis and management of TB29. Despite the availability of various diagnostic techniques, the diagnostic dilemma still exists, especially for genital TB. Therefore, FGTB requires a thorough systematic clinical examination with a high degree of suspicion and the use of intensive investigations30. The possibility of FGTB should be considered in patients with chronic PID unresponsive to standard antibiotic therapy, unexplained infertility, or in women with an irregular menstrual cycle or postmenopausal bleeding and persistent vaginal discharge (where neoplasms genitals were excluded) 31. Risk factors include contact with a patient with smear-positive pulmonary TB, history of TB infection, residence or recent travel to endemic areas, low socioeconomic background, people living with HIV and drug addiction 32. There is no single diagnostic test to confirm the diagnosis of FGTB. A high degree of clinical suspicion, an extensive history, systemic examination, a battery of tests to document M. tuberculosis as well as imaging methodologies for characteristic structural changes are essential for diagnosis.

Tuberculosis (TB) remains a major public health problem worldwide with 10 million people developing active TB each year and 1.33 million deaths. Most (85%) deaths from tuberculosis occur in developing countries, particularly in Asia (55%) and Africa (30%), with most cases (75%) being in the age group 15-45 years old. Multidrug-resistant (MDR) and extensively drug-resistant (XDR) tuberculosis, with high morbidity and mortality, is a real cause for concern The World Health Organization (WHO) declared tuberculosis a global emergency in 1993 and recommended the Directly Observed Acute Treatment (DOTS) strategy to control the disease globally, by especially in developing countries. India's Revised National Tuberculosis Control Program (RNTCP) integrated the DOTS strategy across India at the end of 2005, diagnosing about 71 percent of cases and curing over 87 percent of cases with seven-fold reduction in mortality. Female genital tuberculosis (FGTB) was first reported by Morgagni in 1744 during the autopsy of a young woman who died of tuberculous peritonitis. The incidence of FGTB, a type of extrapulmonary TB (EPTB) is increasing in young women worldwide. FGTB causes menstrual dysfunction and infertility in women. Early detection and appropriate combined treatment regimens with adequate doses of drugs may reduce damage and future infertility in these women

Tuberculosis (TB) has become an alarming health problem around the world. It is a form of bacterial infection caused by Mycobacterium tuberculosis that initially affects the lungs. Tuberculosis can have a devastating impact on the population and usually comes in two forms, pulmonary tuberculosis and extrapulmonary tuberculosis. Genital tuberculosis mainly belongs to the category of extra-pulmonary tuberculosis that affects the female genitalia. It can also affect the surrounding lymph nodes in the pelvis. It can affect women of any age, but women of childbearing age (15-45 years) are more vulnerable to the disease. According to some research, Mycobacterium tuberculosis is responsible for 90 to 95% of cases of genital tuberculosis. They are contagious in nature and can be passed from person to person by inhaling droplets produced when speaking, coughing and sneezing. They can attack the genital tract through four routes: direct downward spread, lymphatic spread, hematogenous route (mainly the lungs), and primary infection of the genitals during intercourse. The genitals affected by Mycobacterium tuberculosis include the fallopian tube, uterine endometrium, ovaries, cervix, uterine myometrium, and vagina / vulva. According to top Delhi gynecologists, genital tuberculosis can be asymptomatic in nature. Also, it can be disguised for other gynecological conditions, especially infertility. Some of the other possible signs and symptoms include: Chronic pelvic pain, Mild fever, Fatigue and weight loss,

Abnormal vaginal discharge, Irregular periods Because genital tuberculosis is mainly asymptomatic, it requires systematic clinical examination, a high degree of suspicion, taking history, battery of tests and imaging methodologies for an appropriate diagnosis. This bacterial infection most often affects the lungs, but extra pulmonary tuberculosis can attack other parts of the body, including the lymph nodes or the urinary tract. In countries with high prevalence of tuberculosis, such as parts of Southeast Asia, genital tuberculosis can be an important etiologic factor of infertility.