Case Report

Genital Tuberculosis Causing Primary Infertility with Secondary Amenorrhea

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ABSTRACT

Genital tuberculosis is a rare condition and represents a minority of tuberculosis cases, accounting for less than 1% of all cases. Here, we present the case of a 21-year-old female who complained of primary infertility for 6 years, post-coital bleeding, and secondary amenorrhea for 2 years. On per vaginal examination, the cervix was swollen and the internal os was tightly closed. Biopsy along with other regular investigation was done. The biopsy results showed the presence of granulomatous inflammation, which was consistent with tuberculosis. The patient responded to antitubercular therapy and her menstrual cycle become regular.

Keywords: Cervix, Infertility, Tuberculosis, Amenorrhea

INTRODUCTION

Tuberculosis (TB) affecting the cervix of the uterus is a rare type of genital tuberculosis that presents in various ways. It comprises only 0.1-0.65% of all tuberculosis cases and 5-24% of cases of genital tract tuberculosis.[1] The majority of affected women are in the reproductive age group, and the commonly affected sites are the endometrium, fallopian tubes, and ovaries. Lesions in the cervix are uncommon and can manifest as exophytic, ulcerative, or polypoid growths.[2] In countries with a high prevalence of TB, genital TB is a well-recognized cause of infertility. It usually develops secondary to TB in other sites, particularly the lungs.[3]

CASE REPORT

A 21-year-old nulliparous woman married for 6 years came to the Gynae and Obs. department of Jahurul Islam Medical College hospital outdoor with the complaints of amenorrhea for 2 years and expecting to get pregnant for 6 years. She also complains about occasional post coital bleeding. She had regular menstrual cycle 2 years back. She was treated with cabergoline and desogestrel, ethinylestradiol and norethisterone for six months. But her menstruation did not start and was unable to become pregnant. Pelvic organ ultrasonography revealed normal and her husband's semen analysis was done, the report was normal. There was no persistent cough or weight loss in the patient's medical history. No past, present or family history of tuberculosis. So, her provisional diagnosis was chronic cervicitis with cervical stenosis.

On general physical examination, all the vital signs were within normal range with BMI of 19.5 kg/m^2. There were no palpable lymph nodes. On abdominal, per vaginal and per rectal examination were normal. On speculum examination, the cervix was unhealthy, hypertrophied and tightly closed. She was advised to get admitted in gynae and obs. ward for further evaluation. After admission, examination under general anesthesia was done. The external os was found hypertrophied and the internal os was stenosed. Diagnostic biopsy was done. The histopathology revealed granulomatous inflammation, consistent with tuberculosis (Photograph 1). Routine hematological test reveal high ESR and hemoglobin at its lower

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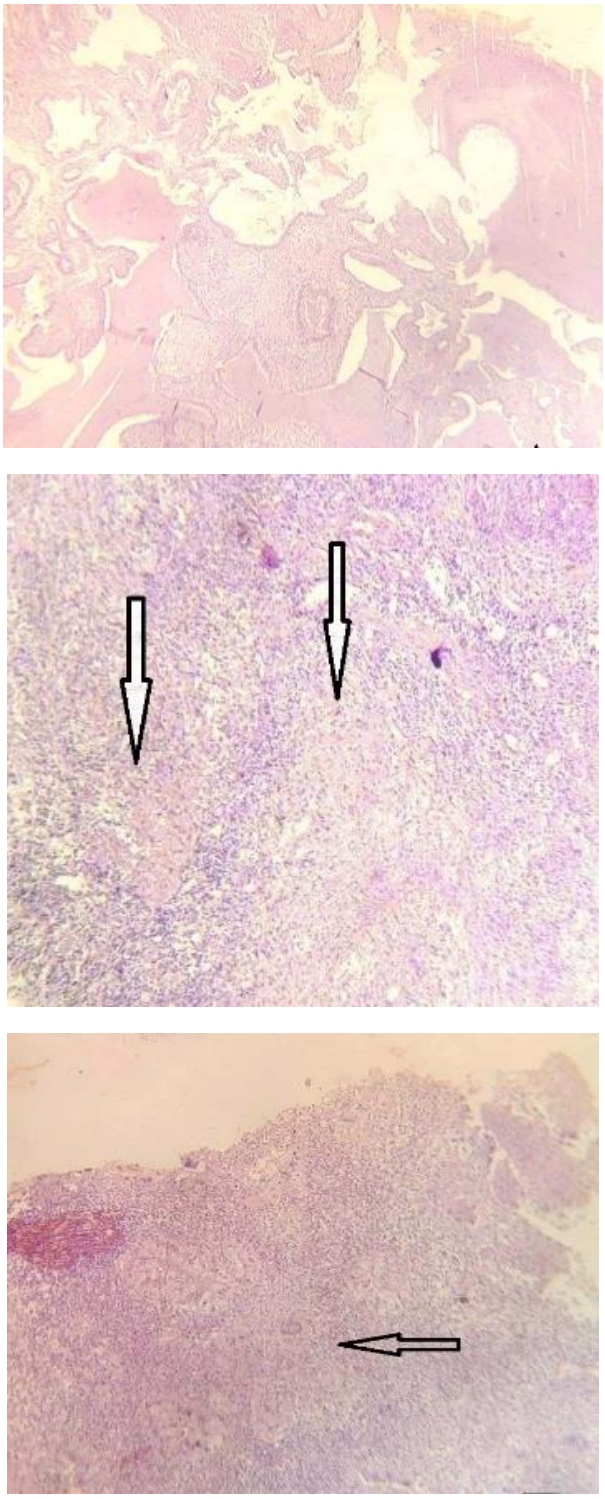

Photograph 1: Photomicrographs show a case of cervical tuberculosis. Granuloma (Arrow) composed of epithelioid cells with central caseation necrosis (Haematoxilin & Eosin).

normal range. Chest radiograph were normal and sputum for AFB were negative.

Patient was given antitubercular treatment for six months. During and after anti TB, patients menstrual cycle become regular and occasional post coital bleeding subsided. On speculum examination, the cervix was healthy with normal cervical os was found. Cervical smear revealed normal endo and ecto cervical cells. Patient was sent to infertility corner for conception management.

DISCUSSION

Tuberculosis is a chronic bacterial infection caused by Mycobacterium Tuberculosis frequently seen in the developing and less developed countries. It is one of the important causes of chronic pelvic inflammation and infertility in women. The fallopian tubes are the commonly affected site, followed by the endometrium and ovaries. The cervix is a rare site of involvement and constitutes 5-24% of all cases of genital tuberculosis.[4]

Genital tuberculosis is prevalent among individuals aged between 20 to 40 years in developing countries, and is a significant socioeconomic burden, particularly among those in the reproductive age group (15-45 years). It contributes to approximately 5-16% of infertility cases among women of reproductive age. However, the true incidence of genital tuberculosis is likely under-reported due to its asymptomatic presentation and limited diagnostic investigations.[5] Infertility (45-55%), pelvic pain (50%), poor general health (25%), and menstrual disturbances (20%) are major presenting symptoms of genital tuberculosis. Tuberculosis should be considered as a possible cause in reproductive age women who present with menorrhagia, post-coital bleeding, an

unhealthy cervix, lower abdominal pain, or growth over the cervix.[6] The pelvic organs can become infected from a primary focus, such as pulmonary tuberculosis, via hematogenous spread. Lymphatic or direct spread usually affects the cervix. In rare cases, cervical tuberculosis may be caused by a primary infection, such as tuberculous epididymitis in the partner.[7]

Grossly, the cervix may appear normal or inflamed, and may resemble invasive carcinoma, both grossly and with the colposcope. In our case, the cervix was stenosed. Diagnosis is made by cervical biopsy, as one-third of cases show a negative culture. Microscopically, extensive chronic inflammation with caseating granulomas is present. Hypertrophy of the cervix or friable papillary or vegetative growth can be observed macroscopically.[8]

The efficacy and safety of treatment by antitubercular drugs should be monitored carefully. The surgical management of uterine adhesion, if present should be done to improve fertility. The post anti TB surveillance of tuberculosis of the cervix requires regular speculum inspection and biopsy, if necessary. Future fertility is poor (5%) even after treatment due to endometrial and tubal involvement at presentation and due to fibrosis after treatment.

CONCLUSION

In areas with a high incidence of tuberculosis, it is important to have a high degree of suspicion for the possibility of tuberculosis in women who exhibit an abnormal cervical appearance. This can facilitate timely intervention, appropriate treatment, and increased social awareness.

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