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Case Report

A rare association of cervical tuberculosis and primary infertility in a young nulligravida female

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ABSTRACT

Tuberculosis of the cervix is rare and may have a clinical presentation and hypertrophic growth like morphological appearance masquerading as that of cervical carcinoma. Due to nonspecific symptoms, there is often a delay in diagnosis and treatment, and thereby increasing the risk of infertility in young females. Here, we present a rare case of a 26 years young female with primary infertility and cervical tuberculosis. The patient presented with complaints of being keen to conceive for 3 years and occasional post coital spotting p/v. Her ultrasonography (USG) pelvis and hormonal analysis and her husband's semen analysis reports were normal. On per-speculum examination, the ectocervix was replaced by a friable growth that bled on touch. A biopsy of the growth was taken and sent for tuberculosis (TB), cartridge based nucleic acid amplification test (CBNAAT), and histopathology. Her CBNAAT was negative, but her histopathology showed numerous epithelioid cell granulomas along with Langhans giant cells and scant central necrosis, suggestive of tuberculosis of the cervix. The patient was sent to a TB clinic and was prescribed anti-tubercular therapy for 6 months. Thus, in any case of infertility in a young female with cervical growth mimicking cervical carcinoma, a differential diagnosis should always be kept in mind.

Keywords: Tuberculosis, Infertility, Ectocervix, Cervical carcinoma, Anti-tubercular therapy

INTRODUCTION

Tuberculosis (TB) of the cervix is rare accounting for 0.1-0.65% of all cases of TB but 5-24% of genital TB.^{1,2} It is caused by *Mycobacterium tuberculosis* complex.³ It usually occurs in women of child bearing age.⁴ TB of the cervix is reported to be very rare.⁵

The common presentation of genitourinary TB in females include amenorrhoea, menstrual irregularities, infertility, vaginal discharges and postmenopausal bleeding.⁶ TB of the cervix may present as an obvious visible growth simulating that of cervical malignancy.

Here we present a case of TB of the cervix in 26 years old nulligravida with primary infertility. This case has been reported in line with the SCARE criteria.⁷

CASE REPORT

A 26-year-old, nulligravida female presented to AIIMS, Rishikesh, India, gynaecology outpatient department with the complaints of unable to conceive for 3 years. The patient had been married for 5 years. On sexual history, the patient complained of occasional post coital bleeding p/v. Her husband is a non-smoker, non-alcoholic and had no history of any chronic medical or surgical illness. The

patient had no complaints of discharge p/v or any menstrual irregularities. She had no complaints of chronic cough, fever, night sweats or any history of loss of appetite or loss of weight. She had no personal or family history of TB.

On physical examination, her vitals were normal, no organomegaly noted on per abdominal examination or no thyroid enlargement or lymphadenopathy noted. On per speculum examination, a friable growth of 4×3 cm was noted replacing the entire ectocervix that bled on touch. A differential diagnosis of cervical carcinoma, tuberculosis of the cervix and cervicitis was made. Punch biopsy from the growth was taken and sent for TB cartridge based nucleic acid amplification test (CBNAAT) and histopathology. On per vaginal examination same growth was felt, uterus was normal in size, ante-verted, B/L fornixes were free and non-tender.

Her ultrasonography (USG) pelvis report showed normal study, her hormonal profile was within normal limits. Her husband semen analysis was also within normal limits. Cervical biopsy CBNAAT came out to be negative. Histopathology of the cervical biopsy showed numerous epithelioid cell granulomas along with Langhans giant cells and scant central necrosis. Thus, a diagnosis of tuberculosis of the cervix was made. The patient was sent to TB clinic and was prescribed anti-tubercular therapy for 6 months.

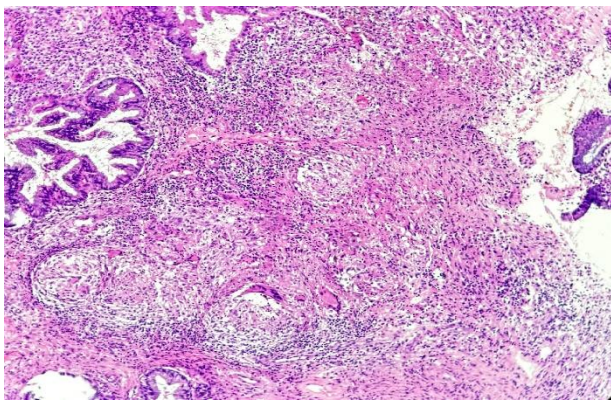


Figure 1: H&E 10x showing numerous epithelioid cell granulomas along with Langhans giant cells and scant necrosis. Normal endocervical glands are also seen.

DISCUSSION

Genital TB in female affects 3-16% of patients in India and also a major cause of morbidity in female. Infertility is one of the main short- and long-term consequences female genital TB.⁸ TB of the vagina and cervix is rare. Since the infection typically spreads directly from the fallopian tubes, it is most severe at the fundus and gets less severe as it moves towards the cervix.⁹ Most of the cases of TB of the cervix are usually asymptomatic.¹⁰ The most common symptoms include amenorrhoea, irregular vaginal bleeding or discharge, and pelvic pain. When

affecting the cervical region, it could mimic malignant neoplasms.¹¹ A speculum examination frequently reveals an unhealthy cervix with potentially malignant-looking mass lesions, as in our patient.¹² Isolating *M. tuberculosis* in cultures is the gold standard for diagnosis, but results can be negative in as many as one-third of cases. However, the histological examination's finding of granulomas is quite suggestive.¹¹ In general TB of the cervix usually respond to six to nine months of standard antitubercular therapy.¹³

Similar to our case report, a case was reported by Guié et al in a 20-year-old female of cervical TB followed by some lesions causing infertility. The diagnosis was confirmed by a histological examination from a biopsy of the cervix.¹⁴ Similarly, a case was reported by Gupta et al of a 35-year-old multiparous lady with complaints of postcoital bleeding and foul-smelling discharge for 3 months. On per speculum examination, a large irregular friable growth was seen which used to bleed on touch. A provisional diagnosis of carcinoma cervix was made, but the cervical biopsy revealed granulomatous inflammation with caseation, consistent with the diagnosis of cervical TB.¹³ Likewise, a case reported by Rodpenpear in 40-years-old women with vaginal discharge and the cervix revealed a hyperemic, irregular in outline, ulcerated, and contact bleeding that similar to cervical cancer. The colposcopic examination showed acetowhite epithelium. Cervical biopsy revealed granulomatous inflammation.¹⁵ In a similar instance, a case was reported in a 50 years old nulliparous female with vaginal discharge. A colposcopy revealed an ulcerated lesion, which raised the possibility of cervical cancer. Ziehl-Neelsen stain was used to identify acid-fast bacillus, and a biopsy revealed a TB granuloma.¹⁶ A case series of three cases was reported by Sachan et al. The first case included a woman in the reproductive age group who had polymenorrhea, post-coital bleeding, and an unhealthy cervix; tubercular cervicitis was identified by the histopathology of the cervical tissue. The second and third cases had different complaints, such as vaginal discharge, post-coital bleeding, and lower abdominal pain with growth over the cervix; the cervical biopsy was not conclusive regarding TB, but the endometrial tissue sample for TB PCR was positive.¹⁷ Similarly, a report of two cases was published by Singh et al. In one case, a young woman presented with primary infertility and secondary amenorrhoea. The other is a perimenopausal woman with irregular vaginal bleeding and postcoital blood-stained discharge. The diagnosis was confirmed on histopathological examination of the endocervical curettages and a cervical biopsy.¹⁸

CONCLUSION

TB is common in developing countries like India. Although cases of TB of the cervix are rare, a differential diagnosis of it must always kept in mind especially in young females who present with primary infertility and have obvious visible growth on the cervix.

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