

## Tuberculous Cervicitis Masquerading as Cancer Cervix: A Rare Case Study

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Primary Tuberculosis of the uterine cervix is an unusual event, with only a few cases reported in the English literature. A 45 year old multigravid woman was referred to Chittagong Medical College Hospital with suspected cervical carcinoma. General, gynecologic, colposcopic and cytologic assessments were done. Diagnosis of cervical tuberculosis was confirmed on histologic examination. Cervical tuberculosis may mimic cervical carcinoma and should be included in the differential diagnosis especially in endemic countries.

[Dinajpur Med Col J 2014 Jul; 7 (2):136-139]

**Key words:** Cervix, Tuberculosis, Paps Smear, Colposcopy, Tuberculous cervicitis

### Introduction

**T**uberculosis (TB) is one of the oldest diseases known to affect humans.<sup>1</sup> TB of the female genital tract accounts for a minority of cases. 90% of cases are those of women in the reproductive age group.<sup>2</sup> Female genital tract (FGT) TB is a prevalent infectious disease in developing countries where pulmonary tuberculosis is widespread.<sup>3</sup> It is impossible to assess the true magnitude of FGT TB since most cases remain asymptomatic, unreported or misdiagnosed. It usually occurs in women of child-bearing age, indicating a possible hormonal relation.<sup>4</sup> Cervical TB accounts for 0.1-0.65% of all cases of TB. TB more frequently affects the upper genital tract—namely, the fallopian tubes and endometrium.<sup>5</sup> Spread to cervix is either by

hematogenous, lymphatic dissemination or by direct extension. The lesion on the cervix can be either exophytic, ulcerative although interstitial and endocervical polypoid form may also occur.<sup>6</sup> Cervical TB may present as vegetative growths on cervix, a military appearance, and/or ulceration simulating invasive cervical cancer.<sup>7</sup> TB of cervix can have a varied presentation and can even mimic malignancy on clinical presentation. The differential diagnosis of TB has to be kept in mind whenever an atypical presentation is encountered in clinical practice.<sup>8</sup> TB of the cervix without other genital involvements are extremely rare.<sup>9</sup> We are reporting a rare case of isolated cervical TB which was clinically presented with the features of carcinoma of the cervix.

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### Case Report

A 45 years old Para 4 live 4 (P4 L4) Bangladeshi, non-smoker housewife by occupation, presented with the complaints of anorexia, pain abdomen, irregular and post-coital bleeding and discharge per vaginum for 6 months came to the Gynae Outpatient Department (GOPD) of Chittagong Medical College Hospital (CMCH). General and systemic examination was essentially normal except thin built with mild pallor. Haematological investigations revealed microcytic hypochromic anaemia with normal WBC count with raised ESR (75 mm in 1<sup>st</sup> hour). Chest skiagram was normal. Per speculum examination showed an unhealthy cervix with a friable growth, which bleeds on touch. Pap smear screening done from the patient and the report was atypical cells of undetermined significance (ASCUS). He had no family history of cancer or TB. The patient was referred to Colposcopy Clinic. Biopsy was taken to reach a histopathological diagnosis. Lesion was necrotic and histopathologically unconfirmed report provided. With these clinical presentation and laboratory reports clinical diagnosis of stage-I A cervical cancer was done. Wertheim's hysterectomy done and the specimen sent for histopathological evaluation. Microscopic examination showed many caseating and non-caseating granuloma consisting of caseation necrosis, epithelioid cells, and Langhan's type giant cells along with chronic inflammatory cellular infiltration noted (Fig 1-6). Sections from the endometrium were unremarkable. So, this case was diagnosed as cervical granulomatous inflammation consistent with tuberculosis based on histopathology report.

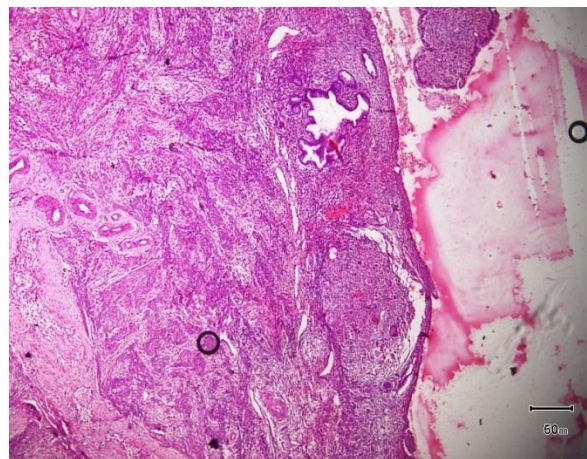


Fig 1. Uterine cervix with granuloma (40X)

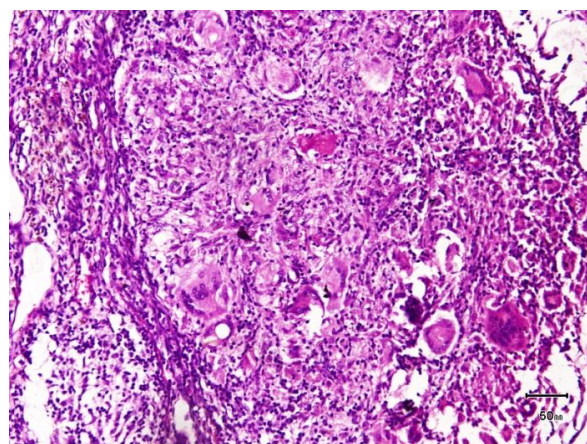


Fig 2. Granuloma (200X)

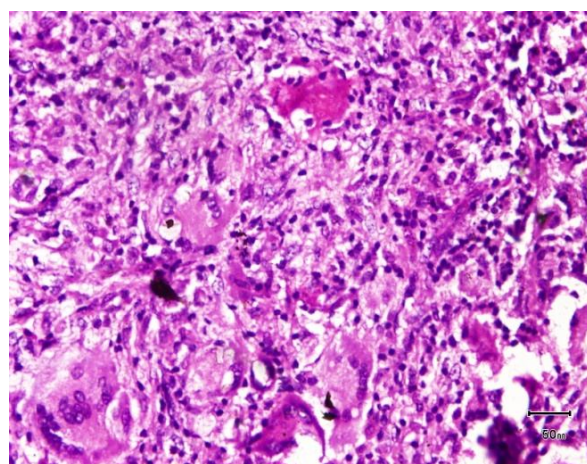


Fig 3. Granuloma (400X)

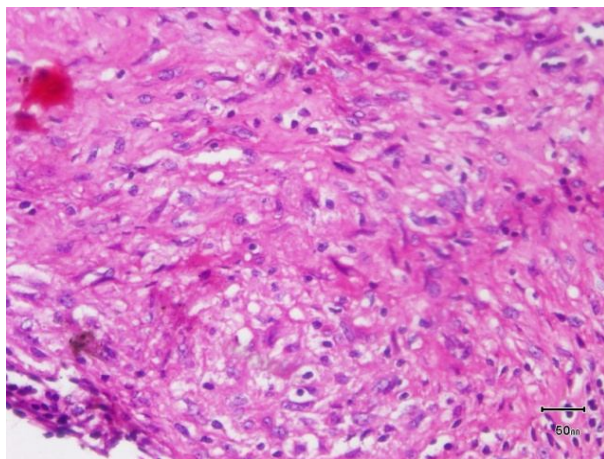


Fig 4. Epithelioid cells (400X)

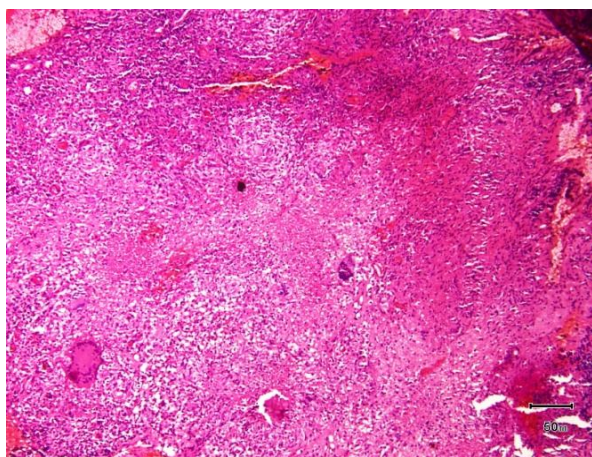


Fig 5. Caseation necrosis (100X)

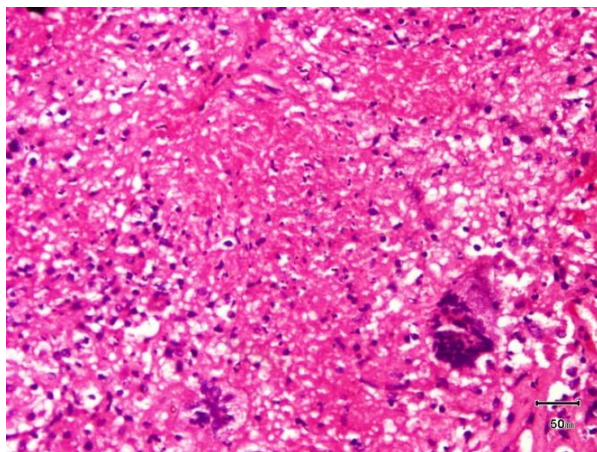


Fig 6. Caseation necrosis (400X)

### Discussion

FGT TB is uncommon and it is rarer still in developed countries. Further, in TB of the

FGT, the upper genitourinary organs, such as the fallopian tubes and ovaries are more commonly affected.<sup>4</sup> Most cases of cervical TB are seen in women from second and third decades of age, indicating a hormonal dependence. We presented a case of cervical TB in one of the tertiary hospitals of Bangladesh due to its rarity. Our patient was unusual since the pathology presented much later in life.

Pelvic tuberculosis is produced primarily by *Mycobacterium tuberculosis* or *Mycobacterium bovis*. Pelvic organs are infected from a primary focus, usually the chest, by hematogenous spread. The cervix is infected as part of this process, by lymphatic spread or by direct extension. In rare cases, cervical TB may be a primary infection, introduced by a partner with tuberculosis epididymitis or other genitourinary disease. Sputum/Saliva, used as a sexual lubricant, may also be a route of transmission.<sup>5</sup> Cervix is relatively resistant to tuberculosis infection because the stratified squamous epithelium of the ectocervix prevents bacterial penetration. In addition, cervical mucus is known to have antibacterial action.<sup>6</sup>

Our patient had no respiratory symptoms on presentation and did not have any previous respiratory history of note. Chest skiagram was normal. Therefore, primary TB of the cervix was suspected in our patient.

Symptomatic genital tract TB usually presents with abnormal vaginal bleeding, menstrual irregularities, abdominal pain, and fever and weight loss. A history of contact with a tuberculosis index case is variable. Tuberculosis of the cervix may present as papillary or vegetative growths, a miliary appearance and/or ulceration stimulating invasive cervical cancer.<sup>8</sup> The histological diagnosis requires demonstration of the caseating granulomas or tubercles in the

cervical biopsy specimens. A lymphoplasmacytic infiltration can be present at the rim of the tubercles. The demonstration of AFB with the Ziehl-Neelsen staining may be difficult. Granulomatous lesions can also be seen in lymphogranuloma venereum, amoebiasis, brucellosis, tularaemia, sarcoidosis, schistosomiasis and foreign body giant cell granulomata to suture, crystal or cotton. The presence of epithelioid cells and multinucleated Langhan's giant cells on the cervical cytology can suggest a tubercular aetiology. The bacterial isolation by culture is the gold standard for the diagnosis.<sup>9</sup> One third of cases are culture negative. Therefore, the presence of typical granulomata is sufficient for diagnosis if other causes of granulomatous cervicitis are excluded or primary focus identified.<sup>1</sup> New modalities and diagnostic tests could be considered such as serodiagnosis by enzyme linked immunosorbent assay (ELISA), which increases the detection rate. PCR (Polymerase chain reaction) technique is also one of the recent advances for rapid detection of tuberculosis. Surgery is rarely indicated, usually in drug resistant cases.<sup>6</sup>

### Conclusion

This case emphasizes that though uncommon, tuberculosis is an important alternative in the differential diagnosis of a malignant appearing lesion of the cervix. With resurgence of tuberculosis worldwide, there should be a high index of suspicion of tuberculosis in women with an abnormal cervical appearance.

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