



Case Report

A Rare Case of Cervical Tuberculosis Masquerading as Carcinoma Cervix.

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Keywords: *Cervix, Tuberculosis, Rare, Histopathology*

ABSTRACT

Genital tract tuberculosis (TB) is an overlooked chronic disease that often presents with low grade symptomatology. Cervical TB is a rare form of genital TB. We present an unsuspected case of a young woman with post-coital bleeding who was suspected of carcinoma cervix clinically, but which on histopathology turned out to be a case of cervical TB.

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Introduction

TB of the female genitalia is unusual and primary infection are rare. Genital organs most frequently affected include fallopian tubes (95-100%), endometrium (50-60%), and ovaries (20-30%).^[1] It is usually encountered in child bearing age group of females, especially in developing countries. TB involving the cervix is a rare event to occur, accounting for only 0.1–0.65% of all TB cases and 5-24% of all genital tract TB cases.^[2] It is usually secondary to a primary focus elsewhere in the body and can have a varied presentations. We present a rare case of cervical TB which was clinically suspected as carcinoma cervix.

Case Report

A 30-year-old married nulliparous woman presented in gynaecology outpatient department with the chief complaints of pain in the lower abdomen and foul smelling vaginal discharge since last 4 months. Her menstrual cycle was regular with no associated dysmenorrhoea but history of post coital bleeding was present. There was no history of any bowel or bladder disturbances. She gave no history of weight loss, fever, night sweats, exposure to TB or past history of TB. She was a non-smoker, non-alcoholic and did not have any other significant medical or surgical illness. Her past history and family history in relation to any genital malignancy were non-contributory. On general physical examination, she was thinly built, averagely nourished weighing 50 kg with no evidence of pallor or lymphadenopathy. Systemic examination did not reveal any abnormality. Her routine haematological and biochemical parameters were within normal limits. Chest X-ray was normal. Antibody tests for human immunodeficiency virus (HIV) and syphilis infection were negative. On per speculum examination, a friable growth was present, which easily bled on touch, covering mostly the ectocervix and part of endocervix which was covered with whitish secretion. A smear as well as endocervical and vaginal swabs were taken. On ultrasonography (USG), a normal sized uterus with normal adenexas and a thin endometrium could be seen. Bimanual examination revealed the uterus to be retroverted, normal in size and mobile and the fornices were free. No adenexal mass could be palpated. Per rectal examination did not reveal any induration or nodularity of parametria and rectal mucosa was smooth and freely mobile. Colposcopic examination showed increased vascularity with mild acetowhite and iodine negative areas (Figure 1). The lesion was excised under colposcopic guidance and send for histopathological examination. An endometrial sampling was also done. The cervical cytology smears showed presence of clusters of epithelioid cells along with dense inflammation, suggesting a granulomatous etiology of the cervix. Other swabs for

infections revealed no abnormality. On gross examination, there were two containers (one labelled cervical biopsy and other endometrial curettings), containing multiple grey brown soft tissue pieces together measuring 2x1.3x0.8cms and 1x1x1cms respectively. Microscopic examination of cervical biopsy showed ectocervical and endocervical lining with the underlying subepithelial tissue showing numerous epithelioid cell granulomas, Langhans giant cells along with focal areas of necrosis along with dense acute and chronic inflammatory cells (Figure 2a and 2b). The staining for the acid-fast bacillus (AFB) was negative. The endometrial curettings showed endometrial glands in proliferative phase. Based upon the histological findings, the case was designated as cervical TB.

The evaluation for primary pulmonary TB turned out to be negative. Her monogamous partner was evaluated for pulmonary and genitourinary TB by doing urine and semen analysis for AFB as well as USG of the testes and the epididymis, but all turned out to be negative. The possible mode of transmission, whether it was an ascending or a descending infection, could not be established. The patient received 6 months of anti-tuberculous therapy (ATT) and a speculum examination which was done after the completion of the therapy, revealed a normal looking cervix.

Discussion

Genital TB is a major socioeconomic burden in India, afflicting 14 million people, mostly in the reproductive age group (15-45 years). It is involved in about 5-16% of cases of infertility among Indian women, though the actual incidence may be under-reported due to its asymptomatic presentation and paucity of investigations.^[3] The incidence of TB has increased recently especially where HIV and TB are endemic.^[4]

Cervical TB is an uncommon and usually an incidental finding. This is attributed to the immunity offered by

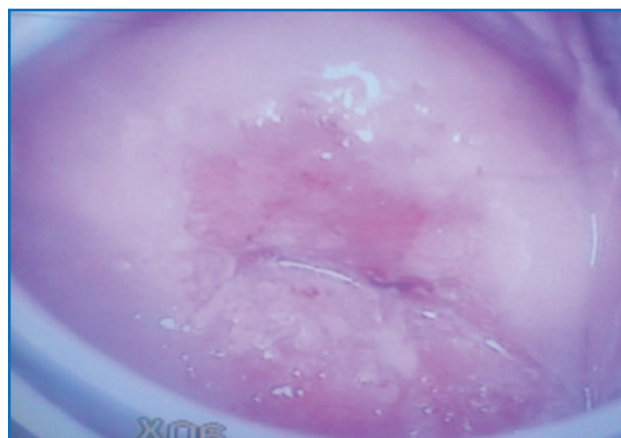


Fig. 1: Suspicious cervix on colposcopy.

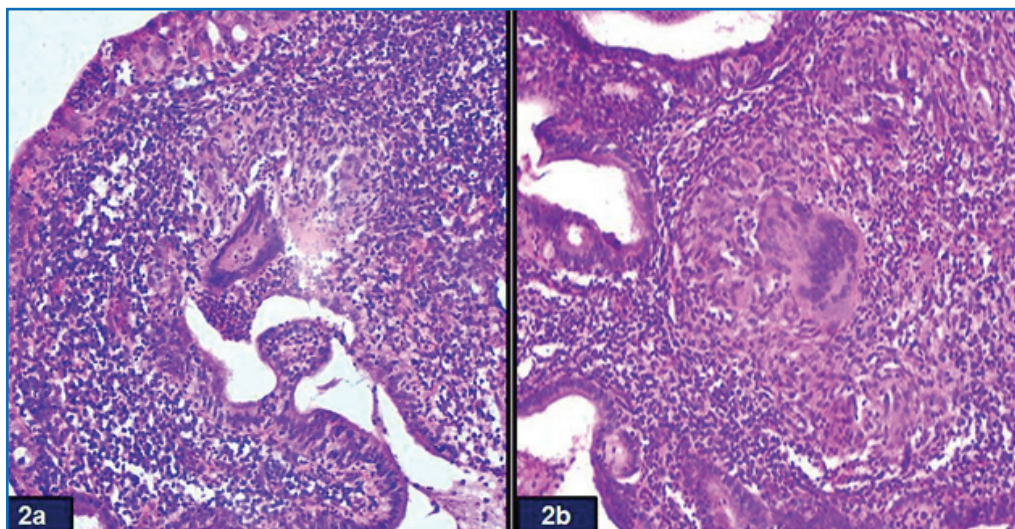


Fig. 2: a - Histopathology of cervix showing both ectocervical and endocervical epithelial lining with epithelioid cells, Langhans giant cell and dense inflammatory infiltrate in the subepithelial tissue (H and E, ×10). b - Epithelioid cell granuloma with cervical glands (H and E, ×40).

stratified squamous epithelium of the ectocervix to the penetration of tubercle bacilli and great vascularity of its mucosa. The cervical mucus, is also known to have anti – bactericidal action.^[5] Its resistance is undermined by repeated trauma in active sex life and trauma during labour.

Genital TB is almost always secondary to TB elsewhere in the body-usually pulmonary and sometimes renal, gastrointestinal, bone, or joint; occasionally it is part of a generalized miliary disease process. If the bacilli are not eradicated, there is a lifelong risk of reactivation, especially in conjunction with diseases or drugs that cause attenuation of T-cell response (e.g. Hodgkin's lymphoma, HIV, steroids, stress, or malnutrition). The mode of spread is usually hematogenous or lymphatic and occasionally occurs by way of direct contiguity with an intraabdominal or peritoneal focus.^[6] The focus in the lung often heals, and the lesion may lie dormant in the genital tract for years, only to reactivate at a later time. In rare cases, cervical TB may be a primary infection, introduced by a partner with tuberculous epididymitis or other genitourinary disease. It has been suggested that sputum, used as a sexual lubricant, may also be a route of transmission.^[1]

The clinical diagnosis of genital TB requires a high index of suspicion. The major presenting symptoms are infertility (45-55%), pelvic pain (50%), poor general health (25%), and menstrual disturbances (20%). TB is to be considered in the differentials of reproductive age group females, who presents with polymenorrhagia, post-coital bleeding with an unhealthy cervix, discharge per vaginum, lower abdominal pain or growth over the cervix.^[7]

Grossly, the cervix may appear normal or inflamed, and its condition may resemble invasive carcinoma, both grossly and with the colposcope.^[8] Four types of tuberculous invasion of cervix have been distinguished: ulcerative, military, papillary and interstitial. The ulcerative type is usually characterized by a single lesion, the edges of which are rather well defined. The ulcer bleeds easily upon contact but less so than in instances of carcinoma. The papillary type may be confused with carcinoma, which it may resemble closely. In the miliary variety, the cervix is enlarged and small military tubercles may be visible on the surface. The interstitial type appears first in the substance of the cervix, forming a nodule which may become necrotic. The necrotic material may be discharged, leaving a cavity^[9]

Isolation of tubercular bacilli on microscopy and culture, are the cornerstones to its diagnosis. Microscopic examination reveals caseating granulomas. AFB staining is usually not found to be very useful. Hence, culture is the gold standard for its diagnosis but a third of cases are culture negative. Therefore, the presence of typical granulomas is sufficient for diagnosis if other causes of granulomatous cervicitis are excluded or a primary focus has been identified. The differential diagnosis for granulomatous diseases include sarcoidosis, crohn's disease, actinomycosis, leprosy, granuloma inguinale, lymphogranuloma venereum, syphilis, histoplasmosis, brucellosis, berylliosis, silicosis, tularemia, schistosomiasis, filariasis and foreign body reaction.^[10] The cytological examination of the smear taken from the cervix is quite useful in identifying cervical TB as seen in our case and supported by many authors.

^[11] Many researchers have also documented that other

investigations like rapid molecular techniques, serological and drug sensitivity tests are promising for its diagnosis.^[12,5]

Cervical TB responds to six months of standard ATT.^[2] There is rarely any need of surgery except in cases resistant to medical treatment. Cases similar to the present case, which were confused with carcinoma cervix, has been reported by few authors.^[13,14] The necessity for immediate differentiation is apparent as irradiation of a tuberculous cervix is a therapeutic error, as the insertion of radium preceded by the necessary dilatation of the cervix predisposes to the spreading of the disease. The radical surgical procedures, which are employed in the treatment of cervical cancer, subject the woman with a cervical TB to a greater risk than is necessary.

Fertility in future even after treatment is generally poor in these patients, owing to the widespread nature of cervical TB to endometrium and fallopian tubes and subsequent healing by fibrosis, precluding favorable obstetric outcome. Rarely if the disease is localized and the treatment is promptly started, the childbearing capacity is retained. Hence, awareness and proper follow up of cervical TB is necessary.

Conclusion

Cervical TB should be included as a differential diagnosis while dealing with the cervical lesions especially in suspected cases of carcinoma cervix. A high index of suspicion is required in reproductive age group patients residing in TB endemic area as appropriate investigations can lead to timely intervention, suitable treatment and contact tracing.

Acknowledgements

None

Funding

None

Competing Interests

None declared

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