

Tubercular Cervicitis Clinically Mimicking Malignancy: Cytodiagnosis of Two Cases.

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ABSTRACT

Genital tuberculosis (TB) in females is found in 0.75-1% of gynecological admissions in India with considerable variation from place to place and occurs in 10% cases of pulmonary TB. During colposcopy a bulky, necrotic cervix with parametrial thickening in pelvic TB often elicits an initial diagnostic impression of carcinoma of cervix. As the detection rate of AFB is low, definitive diagnosis of genital TB in females often depends mainly upon the cytological and histopathological examination. Here we describe two cases of cervical TB diagnosed by PAP smear, which showed granulomata consisting of multinucleated giant cells, histiocytes, epithelioid cells, lymphocytes and fibroblasts. Both the cases were clinically suspicious of carcinoma cervix. Diagnosis was confirmed in the first case by other supportive evidence like associated pulmonary TB and therapeutic response to ATT. Histopathology confirmation was done in the second case.

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Introduction

Cervical tuberculosis (TB) accounts for 0.1-0.65% of all case of TB and 5-24% of genital tract TB.^[1] Mostly occurs in reproductive age group (15-45year) and commonly affects fallopian tubes making many Indian women infertile. Early diagnosis is difficult because of lack of specific symptoms and this form of TB is continued to be ignored in TB control programmes. In advanced stages it can clinically mimic malignancy. Here we report two such cases of cervical TB diagnosed by cytology.

Case Report

Case 1: A 38 year multiparous female complained of menstrual irregularities since 2 years, pain in lower abdomen and post coital bleeding since 6 months. There was no history of significant weight loss or contact with tuberculosis or genital malignancy in the past and in the family. Per speculum examination revealed an unhealthy cervix with a small ulcer. Pap smear was done from unhealthy cervix. Cytology smears showed epithelioid granulomas with multinucleated giant cells suggestive of granulomatous cervicitis (Fig-1) and was advised biopsy to rule out tuberculosis. Then the patient was referred to chest and TB department for further workup and management. Further investigations showed positive mantoux test

(24 mm), ESR –40mm in 1st hour and a single lesion in chest x ray. All other hematology and biochemical parameters were normal. Based on cytology and other supportive evidence, patient was put on antitubercular therapy. Patient took complete treatment and cured .Cervical lesion also resolved.

Case 2: A 40 year old female complained of white discharge per vaginum since 3 years. She was treated in a local hospital and improved a little but not relieved completely. Then the patient was referred to our hospital. There was no significant past or family history of contact with tuberculosis. Per speculum examination revealed erosion of anterior lip of cervix measuring 3x2cm, hard, congested, and was bleeding on touch. Clinical diagnosis was suspicious of carcinoma cervix. Pap smear from the lesion showed epithelioid granulomas with multinucleated giant cells suggestive of granulomatous cervicitis and was advised biopsy for confirmation. Biopsy showed epithelioid cell granuloma with an occasional Langhans type giant cell (Fig-2&3). Caseation necrosis was not seen and AFB stain was positive (Fig-3). She is currently under follow up and have received anti-tubercular therapy (ATT) for five months. Now cervix appears almost healthy in per speculum examination.

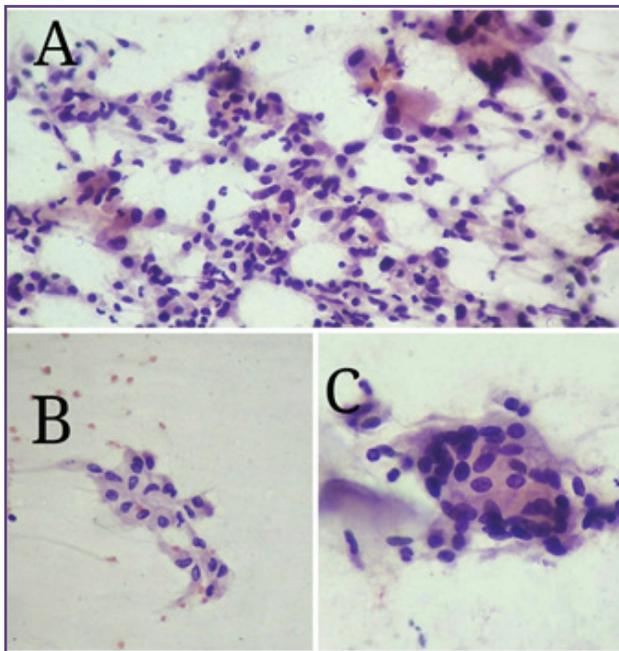


Fig. 1: (A) Granuloma composed of, histiocytes, epithelioid cells, lymphocytes. (Pap, 10x); (B) Epithelioid histiocytes in cluster. (Pap, 10x); (C) Multinucleated foreign body giant cell (Pap, 40x)

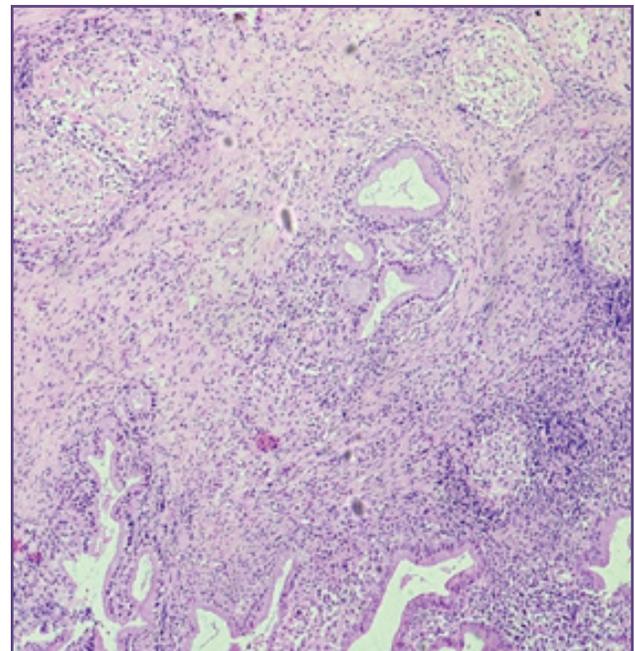


Fig. 2: Multiple non-caseating granuloma in cervical tissue. (H&E,10x)

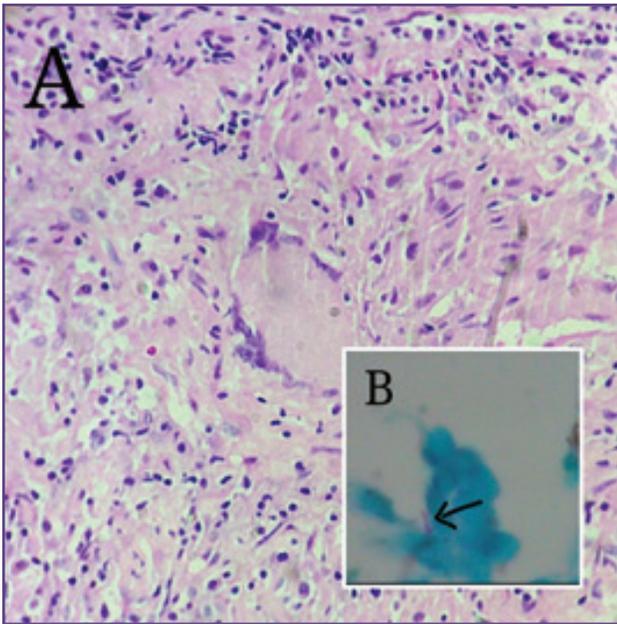


Fig. 3: (A) Granuloma composed of multinucleated Langhans type giant cells surrounded by histiocytes, epithelioid cells, lymphocytes and fibroblasts. (H&E, 40x) (B) Pink stained acid fast bacilli, arrow marked. (ZN Stain, 100x)

Discussion

Incidence of TB is still high in India. The true incidence of genital TB is not known due to subtle presentation. It has been estimated that approximately 5% of females presenting to infertility clinics worldwide have genital TB.^[2] However, estimated incidence varies from less than 1% in the United States to 19% in India. About 80% to 90% female genital TB is diagnosed in 20–40 years old patients, often during workup for infertility.^[2]

Genital TB occurs mostly secondary to pulmonary tuberculosis, commonly by the haematogenous route. The fallopian tubes are affected in almost 100% of the cases, followed by the endometrium in 50%, ovaries in 20%, cervix in 5% and vagina and vulva in <1%.^[1] The lesions in the cervix and vagina are rare and usually present as isolated, chronic, ulcerative lesions.^[3] The infectious agent in TB is usually *Mycobacterium tuberculosis* and occasionally *Mycobacterium bovis*. Clinical symptoms can be variable. Infertility (in 60% of cases), pelvic pain and menstrual disorders like scanty menstruation and amenorrhea, post coital bleeding are the usual presentation and some patients may be asymptomatic.^[1]

Macroscopic changes of tuberculous cervicitis are not specific, may appear normal or inflamed. The most common type is the ulcerative form, although papillomatous and

miliary forms may also occur. Histology shows typical caseating granulomatous inflammation with Langhans giant cells and sometimes marked inflammatory atypia along with frequent hyperplastic mucosal changes in epithelial cells. This condition may resemble invasive carcinoma, both grossly and with the colposcope.^[4,5] Hence histological proof is of utmost importance. Staining for acid-fast bacilli was not found to be very useful. Isolation of the mycobacterium is the gold standard for diagnosis but a third of cases are culture negative. Therefore, the presence of typical granulomata with Langhans giant cells is sufficient for diagnosis if other causes of granulomatous cervicitis are excluded or a primary focus identified.

The cytopathologic examination of the cervix may reveal multinucleated Langhans type giant cells, histiocytes, epithelioid cells arranged in clusters, lymphocytes and fibroblasts simulating the appearance of the granulomata. There may be associated epithelial atypia from which dyskaryotic cells are shed.^[4,6] Rarely, exclusion of tuberculosis or its distinction from a healing non-tuberculous chronic cervical lesion is quite difficult. Histopathological confirmation is needed in such cases.^[7] In both the cases we did not find Langhans giant cells in Pap smear. So our final diagnosis was based on clinical and therapeutic response in the 1st case and histologic confirmation of tuberculous cervicitis in the 2nd case. Differential diagnosis included other granulomatous diseases of the cervix like amoebiasis, sarcoidosis, leprosy, crohn's disease, actinomycosis, granuloma inguinale, schistosomiasis, foreign body reaction, Brucellosis, tularaemia, filarial, syphilis and silicosis.^[8]

The diagnosis of the disease is difficult. Apart from varied clinical presentation, a past history of tuberculosis or a history of contact may not be forthcoming and an evidence of tuberculous lesion elsewhere may be lacking. Therefore, all the available diagnostic techniques should be combined judiciously and correlated with the clinical profile prior to instituting the antituberculosis treatment (ATT). The total duration of treatment should be six months to a year.^[9,10] Prompt ATT and appropriate surgical intervention has improved the results in terms of cure from the disease, restoration of female reproductive function and reduction of procedural and postoperative complications.

Conclusion

If kept high index of suspicion and awareness, diagnosis of tuberculous cervicitis can be made with simple, non invasive, low cost test like papanicolaou (PAP) smear test. Finding of only epithelioid granuloma in PAP smear without typical Langhans' giant cells, caseation necrosis and AFB positivity necessitates histologic confirmation and correlation with other supportive investigations.

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Competing interests

None

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