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## Case Report

# A rare case of cervical tuberculosis mimicking carcinoma cervix

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### ABSTRACT

Cervical tuberculosis is a rare entity with only limited number of case reports in the literature. A 53 year old, P1, post-menopausal housewife presented with history of one episode of post-menopausal bleeding and whitish discharge per vaginum. Speculum examination revealed an ulceroproliferative cervical growth. Clinically she was diagnosed to have carcinoma cervix. However, cervical biopsy confirmed the diagnosis of cervical tuberculosis. She was treated with anti-tubercular drugs for six months and has been disease free for the last two years. This case emphasizes the fact that though cervical tuberculosis is rare, it should be considered in the differential diagnosis of carcinoma cervix.

**Keywords:** Cervix, Carcinoma cervix, Genital, Tuberculosis

### INTRODUCTION

India has highest burden of tuberculosis cases in the world. 35% of our female population is affected with it.<sup>1</sup> Genital tuberculosis is mostly secondary to primary infection elsewhere in the extragenital organs. The fallopian tubes are mostly involved from where secondary spread occurs to other genital organs. The incidence of genital tuberculosis is about 1% amongst the gynaecological patients.<sup>2</sup> Cervical Tuberculosis accounts for 0.1-0.65% of all cases of tuberculosis<sup>3</sup> (TB) and 5-15% of genital tract TB<sup>2</sup>. We present this case as it is rare and it may clinically mimic cervical cancer leading to misdiagnosis.

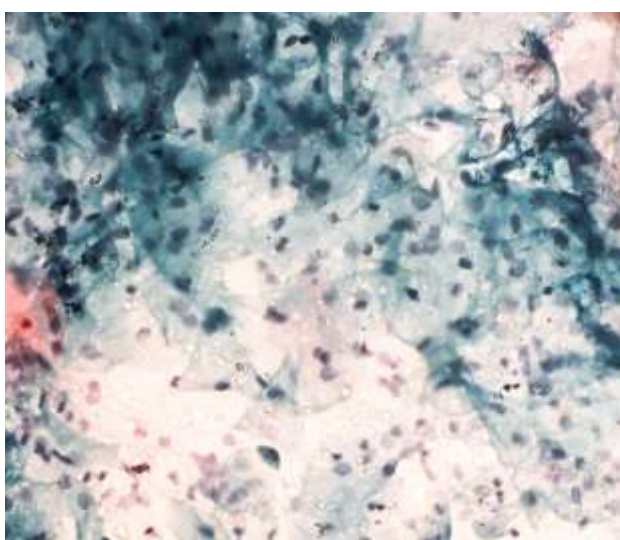
### CASE REPORT

A 53 year old, P1, housewife, menopausal for 4 years presented with history of an episode of post-menopausal bleeding that lasted for two days. She had been having whitish discharge per vaginum for the last 2 months. She denied any history of bowel and bladder disturbance, chronic cough, night sweats, fever, loss of appetite or weight, vulvovaginal itching and post coital bleeding. There was no significant past surgical or medical history including tuberculosis and any immunodeficiency

disease. She was nonsmoker and non-alcoholic. There was no family history of tuberculosis or any genital malignancy. Her BMI was 26kg/m<sup>2</sup>. Peripheral lymph nodes were not palpable. Abdominal examination revealed no organomegaly. Vulva was healthy. On speculum examination the cervix looked unhealthy with an ulceroproliferative cervical growth of approximately 3cm in size which bled on touch. Vagina was healthy with foul smelling whitish discharge in it. Bimanual examination revealed an anteverted freely mobile, atrophied uterus. There was no adnexal mass or forniceal tenderness. Parametrium appeared to be free on bidigital examination. On per rectal examination the rectal mucosa was free. Clinically she was diagnosed as a case of carcinoma cervix and multiple punch biopsies were taken for tissue diagnosis.

Hematological investigation revealed a raised ESR (40mm fall in first hour). The Mantoux (tuberculin) test was positive (24mm). Screening test for Human Immunodeficiency Virus (HIV) infection was negative. Chest X Ray was normal. Ultrasound sonography revealed a bulky cervix with growth and a normal uterus and adnexa. Endometrial thickness was only 2mm. Cervical biopsy revealed cervical tuberculosis (multiple epithelioid cell granuloma, Langhan's giant cells) (Figure

1). After histopathological examination (HPE) report effort was made to isolate the bacteria. However, three cervical, vaginal, urine and sputum samples were negative for acid fast bacilli and failed to culture mycobacteria. Schistosomal, amoebic, and brucella antibodies were also negative. Thus she was diagnosed to have cervical tuberculosis based on HPE report and was put on four antitubercular drugs (Isoniazid, Rifampicin, Ethambutol, Pyrazinamide) for the first two months and two drugs (INH, Rifampicin) for the next four months. She responded to treatment well. Follow up was done with relevant history taking, visual inspection of the cervix and cervical smear testing. The cervical lesion disappeared and cervical smear was normal after completion of the treatment. She is asymptomatic and disease free since last two years.



**Figure 1: The cervical biopsy shows hyperplastic thickening of the lining stratified squamous epithelium. Beneath it are endocervical glands lying in a fibrocollagenous stroma, densely infiltrated by histiocytes and chronic inflammatory cells. Multiple epithelioid cell granulomas with Langhan's and foreign body giant cells are present. There is no evidence of malignancy.**

## DISCUSSION

India has highest burden of tuberculosis cases in the world. As per World Health Organisation (WHO) statistics for 2015 the estimated incidence figure of TB for India was of 2.8 million cases (out of a global incidence of 10.4 million) out of which 35% were among females.<sup>1</sup>The incidence is even higher in HIV positive cases. The incidence of genital tuberculosis is about 1% amongst the gynaecological patients attending the outpatient department in the developing countries.<sup>2</sup> The fallopian tubes are mostly involved from where secondary spread occurs to other genital organs.<sup>2</sup> Cervical Tuberculosis accounts for 0.1–0.65% of all cases of tuberculosis<sup>3</sup> (TB) and 5–15% of genital tract TB.<sup>2</sup>

Genital tuberculosis is mostly secondary to primary infection elsewhere in the extragenital organs like lungs (50%), Lymph nodes, urinary tract and joints. Pelvic organs acquire the infection through haematogenous route (90%) or directly or through lymphatic channels from the neighbouring infected organs or through sexual contact. The cervix is infected, as part of this process. Rarely the cervix may be primarily involved after direct exposure of tubercular infection from a sexual partner having tuberculous epididymitis or other genitourinary disease. Sputum, used as a sexual lubricant, may also lead to development of cervical tuberculosis.<sup>4</sup>

Unlike our patient, the infection generally (80%) occurs during child bearing period. The patients with genital tuberculosis may remain asymptomatic or else may present with constitutional symptoms (like weakness, anorexia and low grade fever), abnormal vaginal bleeding, infertility, chronic pelvic pain and vaginal discharge. Our patient presented with vaginal discharge and post menopausal bleeding. On per speculum examination the growth may have proliferative (vegetative/papillary), ulcerative or miliary type. All these appearances may simulate cervical cancer, as we saw in our case.

Caseating granulomatous lesion is seen microscopically but the granulomatous lesion is not synonymous to tuberculosis as it may be seen in other diseases like schistosomiasis, amoebiasis, brucellosis, tularaemia, sarcoidosis, and foreign body reaction.<sup>5</sup> Isolation of mycobacterium is the gold standard diagnostic test. However, since one third cases are culture negative, typical granulomata is sufficient for the diagnosis, provided other causes of granulomatous cervicitis have been ruled out or primary focus has been identified. As per Agarwal J et al, staining for acid fast bacilli was not found to be very useful in making the diagnosis.<sup>6</sup> Chakraborty P et al in their retrospective review found that ulcerative lesions usually are auramine negative as was there in our case.<sup>7</sup> Molecular probes used to detect acid fast bacilli may be more sensitive than culture but have reduced specificity. We did not have bacterial evidence but as we ruled out other causes of granulomatous lesion and as tuberculosis was suggested by the pathologist, we treated our patient as a case of cervical tuberculosis. The fact that the patient improved on antituberculous treatment, further confirms correctness of our diagnosis.

The lesion requires standard anti tubercular therapy for six months for complete response as we could see in our case. The follow up examination of the visible lesion over the cervix or histological examination of serial biopsy specimens may be used to assess therapeutic response.<sup>8</sup>

## CONCLUSION

The visual appearance of a case of cervical tuberculosis mimics cancer cervix, thus its possibility should be kept

in mind as an important differential diagnosis of cancer cervix. This is more relevant for a country like ours where Tuberculosis is quite prevalent and cases of HIV infection is on rise.

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