

## Tuberculosis of the Uterine Cervix --- A Rare Case Report

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### Abstract

In female genital tuberculosis, the bacilli reach the genital tract primarily by the hematogenous route (95%), less commonly by lymphatic spread and least common by ascending direct spread. The female genital tuberculosis thus, is secondary to a primary elsewhere. The haematogenous/trans-serosal spread/exudation may give rise to pelvic inflammatory disease and subsequently extensive pelvic diseases. Primary tuberculous infection of the female genitalia/tract may rarely occur from direct inoculation during sexual intercourse. Most such men are asymptomatic for tuberculosis or may harbor subclinical disease. The clinical presentation of female genital tuberculosis generally is non-specific/asymptomatic/or mimic other gynaecological conditions which leads often to delay in diagnosis therefore a high degree of suspicion needs to be exercised. We report a rare case of primary tuberculosis of the uterine cervix in a young 25 year old lady.

**Keywords:** Secondary Amenorrhea; Vaginal Discharge Tuberculosis of the Cervix

### Introduction

Tuberculosis is a disease which can affect any organ system and can have myriad presentations and manifestations. However, the most common form of tuberculosis worldwide is pulmonary tuberculosis. India has the highest burden of tuberculosis worldwide as per the Global Tuberculosis Report 2017, released by WHO.

Extrapulmonary tuberculosis, on an average, accounts for 27% of the worldwide cases and can involve lymph nodes, pleura, abdomen, gastrointestinal tract, urinary system, genital system, skin, joints, and meninges and is more difficult to diagnose.

Female genital tuberculosis is relatively less common, and when it occurs generally involves the fallopian tubes in 95 - 100% of the cases [1,2] while tuberculosis of the cervix, vagina, and vulva together constitute 1% of the cases [3,4]. The cervix is involved in 0.10-0.65% of all cases of tuberculosis [5].

### Case History

A 25 year old lady presented in the Out Patient Department of Obstetrics and Gynecology, Goa Medical College, with the chief complaint of amenorrhea for two years. Prior to that, her menstrual cycles were regular. She was a nulligravida married for three years. There was no history of intake of any medications, irregular spotting, itching, chronic cough, low grade fever, or loss of weight. She was from a poor socioeconomic status. There was no family history of tuberculosis. The patient's husband was a driver, non-smoker, and non-alcoholic.

Her general condition was fair, height of 5 feet 4 inches, weight 47 kg, mildly anaemic, and vital parameters were normal. The systemic examination was unremarkable. On per speculum examination the cervix appeared normal, a slight creamy discharge was noticed which was not foul smelling. Per vaginal examination was unremarkable so also the pelvic ultrasonography.

A provisional diagnosis of secondary amenorrhea (under evaluation) was made; a progesterone challenge test given for five days, investigations advised, and follow up after two weeks.

On review after two weeks progesterone challenge test was negative; the investigations reports were: Haemoglobin 10.2 gm %, Total leucocyte count 9800/mm<sup>3</sup>, differential leucocyte count and routine urine examination were within normal limits, VDRL and HIV were negative; Chest X ray was normal.

Pap smear showed mild inflammatory infiltrate with no atypia or evidence of malignancy.

Serum FSH, LH, Prolactin, testosterone, and thyroid function tests were within normal limits.

She was given a 21 pills packet of combined oestrogen progesterone oral contraceptive with advice to report after one month.

She, however, reported after about 8 months with the chief complaint now of excessive vaginal discharge. She further explained that she had not followed up as she had gone to her hometown and that she had had vaginal spotting once for 2/3 days after her last visit though could not exactly recollect the exact dates of the spotting.

Her clinical examination was the same except on per speculum vaginal examination there was copious creamy discharge, and a small area of papillary erosion on the posterior lip of the cervix with bleeding on touch was seen.

The vaginal discharge swab for culture and sensitivity was sent and she was given a course of broad spectrum antibiotics for a week, following which endometrial sampling and directed cervical biopsy was carried out and sent for histological examination and Z-N staining.

The vaginal swab culture was reported as mixed vaginal flora.

The histopathology reports were:

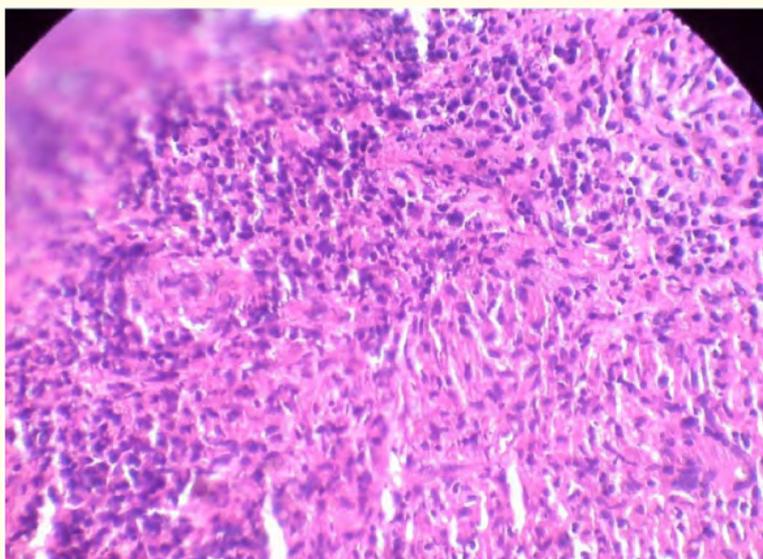
- Scanty proliferative endometrium
- Section from the endocervix showed granulomas consisting of central area of caseation necrosis surrounded by lymphocytes, epithelioid cells, monocytes, and Langhans giant cells.

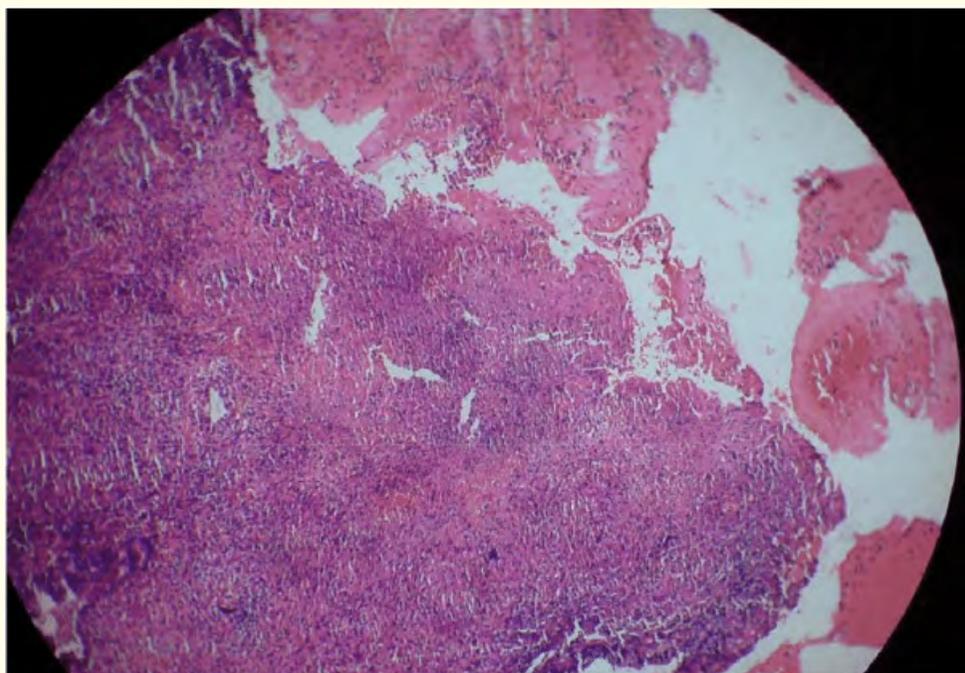
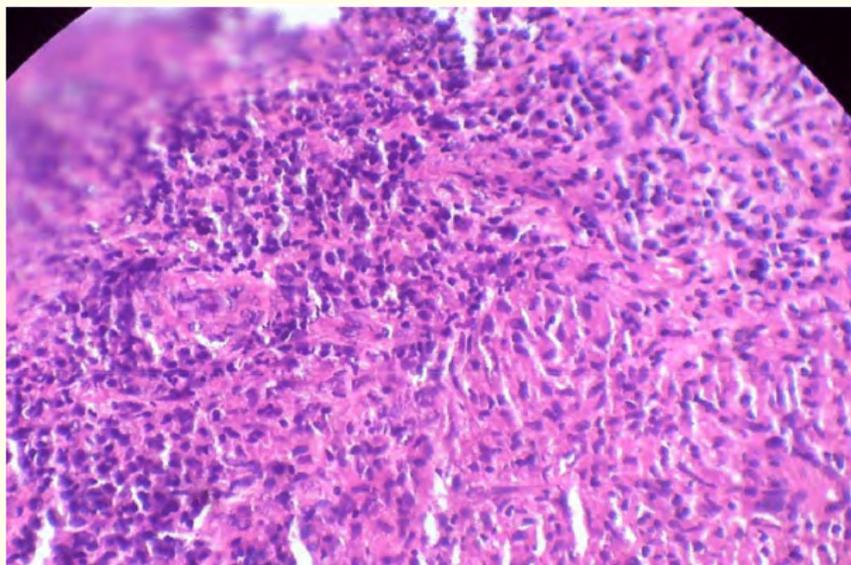
Therefore the final diagnosis of tuberculous of the cervix was made.

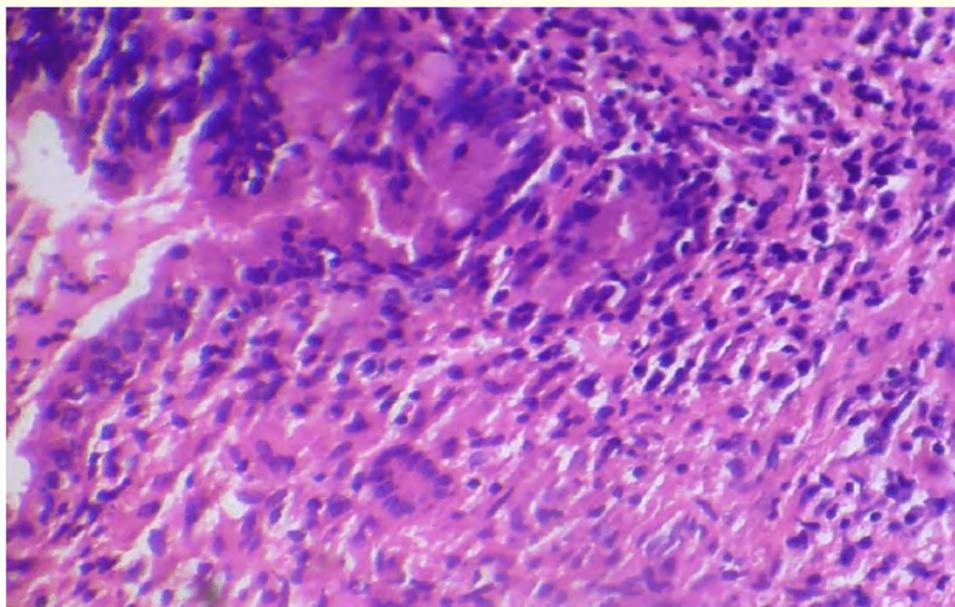
In view of the diagnosis of tuberculosis, her husband, though asymptomatic, was referred to the medical expert for clinical evaluation. The couple had no children.

The couple were further counseled to get their extended family medically screened for tuberculosis when they next visit their home town or intimate them earlier through postal service or telephone to get their family member's medically evaluated.

She was put on antitubercular drugs and seven months later had resumed her menstrual cycles though the menstrual flow was less, but nevertheless she felt satisfied and hopeful.







### Discussion

The incidence of female genital tuberculosis ranges from 1 - 19% and in 90 - 100% the fallopian tube is involved [6]. The patient usually presents with infertility; some patients present with menstrual complaints such as menorrhagia, hypomenorrhea, oligomenorrhea and amenorrhea. 11% are asymptomatic [7,8].

Tuberculosis of the uterine cervix is a rare disease. In the majority, genital tuberculosis is a consequence of haematogenous spread but cervical tuberculosis may be a primary infection introduced from a partner with tuberculous epididymitis or tuberculosis of the genitourinary tract. Sputum, used as a sexual lubricant, may also be a mode of transmission to the cervix [9]. The gross appearance of the tuberculous cervix is highly variable and may present as a papillary/ulcerative/polypoidal cervical lesion. A high index of suspicion is necessary.

The diagnosis of tuberculosis of the cervix is usually made by histological examination of a cervical biopsy specimen and is recognized by the presence of multiple caseating granulomas or tubercles. Heavy lympho-plasmacytic infiltrate is present at the rim of the tubercles.

Unequivocal diagnosis requires demonstration of acid fast bacilli (AFB) on Z-N staining. However, staining for AFB may not be positive in every case [11]. Approximately in 1/3<sup>rd</sup> of the cases, the culture is negative.

Other causes of granulomatous lesions need to be ruled out such as lymphogranuloma venereum, sarcoidosis, schistosomiasis and foreign body cell granulomas secondary to a non-absorbable suture or cotton [10].

### Conclusion

In developing countries with constraints on advanced and expensive diagnostic facilities, and where prevalence of tuberculosis is high, the clinical picture and the presence of a typical granuloma is considered sufficient for the diagnosis of tuberculosis provided other causes of granulomatous cervicitis are excluded, or a primary focus is identified.

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