What is your diagnosis?

A nulliparous female presented with the complaint of postcoital bleeding for one year. After each act of coitus, patient noticed minimal amount of fresh bleeding through vagina, accompanied by yellowish foul smelling discharge for the two months preceding attendance. As the couple was using condoms for contraception, there was staining of condom also with blood. The patient also had a history of anorexia and weight loss over the previous two months. The couple had been married for one year and were in a monogamous relationship. There was no history of any hormonal contraceptive use. However, she did not have a history of any cervical screening, nor had she had human papilloma virus (HIV) vaccination. Her menses were regular and there was no complaint of inter-menstrual bleeding. The patient didn't have any chronic cough or fever, nor there was any family history of tuberculosis.

On examination, body mass index was 18.1 kg/m^2 and she had mild pallor. She didn't have any abdominal mass and on per speculum examination, an irregular 3 cm x 3 cm ulcero-proliferative growth was seen over the cervix (Figure 1), which was friable and bled on touch. The external os could not be visualized as it was obscured by the growth. Colposcopy was performed which suggested a low grade lesion due to absence of acetowhite areas, however erosion of epithelium was noted. The uterus was anteverted, mobile and no adnexal mass or tenderness felt. The parametrium and rectal mucosa were free of growth or nodularity. A colposcopy guided cervical biopsy was taken followed by endometrial biopsy after locating the external os.

Answer

The cervical biopsy report showed multiple granuloma comprising of epithelioid histocytes surrounded by lymphocytes and Langhans multinucleated giant cells (Figure 2), however, staining for acid-fast bacilli was negative.

There was no evidence of malignancy and the endometrium was in the proliferative phase. Thus, the histopathology report suggested tuberculosis of the cervix. Pelvic ultrasound showed a normal sized uterus with normal endometrial thickness and adnexa without any free fluid in the pelvis. The serology for HIV and syphilis was negative. As the primary site of tuberculosis is almost always lungs, a chest x-ray was done, which was normal. A cartridge-based nucleic acid amplification test for *Mycobacterium tuberculosis* in the sputum sample was also negative. The patient was started on antitubercular therapy and there was marked improvement in her constitutional symptoms within one month of starting treatment. Postcoital bleeding stopped after two months of treatment and a repeat examination of the cervix also showed regression of the growth (Figure 3).

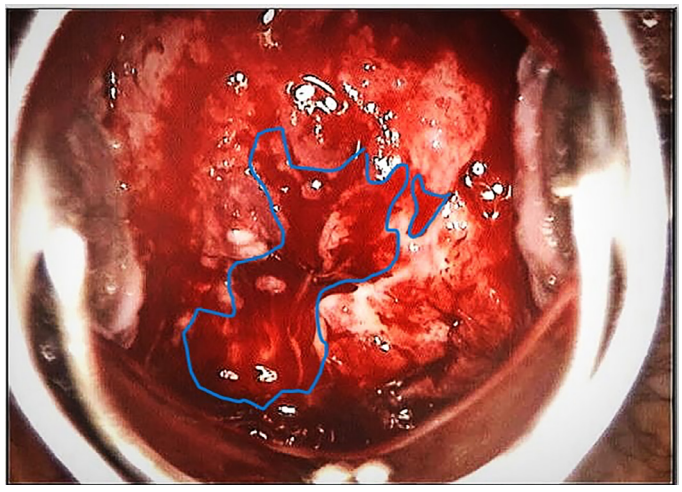

Figure 1. The ectocervix is replaced by an irregular ulceroproliferative growth. The denudation of cervical epithelium is marked by blue outline. The whole surface of cervix appeared friable and hyperemic

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She received therapy for a total of six months and was doing well on follow-up. A pap smear was done after completion of therapy, which was also normal.

The differential diagnosis of cervical growth in a young woman are (Table1).

The common sites of genital tuberculosis are fallopian tubes, endometrium and ovary. Vulva, vagina and cervix are rare sites of genital tuberculosis (1,2). The involvement of cervix alone without involvement of other genital organs is an extremely rare condition. The cervix can be involved with either a polypoidal growth, an ulcer or miliary tuberculosis (3). Although, the gold standard of diagnosis is the presence of acid-fast bacilli detected by either culture or staining by Ziehl-Neelsen or fluorescent stains, it is not always possible to demonstrate this, even in an active case of tuberculosis. In the present case, diagnosis was made on clinical examination which was confirmed by the presence of caseating granuloma, with lymphocytic and plasma cell infiltration on histopathology, which is pathognomonic of tuberculosis. Granulomatous lesions can be present even in sarcoidosis, lymphogranuloma venereum, amoebiasis, brucellosis, or foreign body granuloma but the specific histopathological changes suggestive of tuberculosis are caseating granulomas or tubercles surrounded by lympho-plasmacytic infiltration (4). A search was done in Pubmed using the terms “coital bleed” AND “tuberculosis”. Many similar cases of tuberculosis of cervix have been reported previously from developing countries, mainly from India (3,5-10). Most of these women were in their 20’s to 30’s and had history of postcoital bleed ranging from 3 months to 3 years. The antitubercular therapy includes an intensive phase for the first two months of treatment in which patient takes daily Rifampin, Isoniazid, Pyrazinamide, and Ethambutol. This is followed by a four-month course of continuation phase that consists of daily Isoniazid, Rifampin, and Ethambutol. Most of the women in previous case reports were given therapy for six months and one patient received it for nine months, possibly due to delayed response to the treatment (6).

Table 1. Differential diagnosis of cervical growth

Serial no.	Differential diagnosis	Description
1	Cervical carcinoma	It is unlikely at the age of 32 years, however, malignancy must be ruled out even at younger age. Although the maximum cases of cervical carcinoma in India are reported in the age group of 50 to 59 years, it can occur in young patients also. The only test to rule out malignancy is histopathology of the biopsy specimen.
2	Multiple warts	Cervical warts can be multiple and large enough to mimic growth. The typical appearance of wart is finger like projection over the surface.
3	Cervical tuberculosis	Tuberculosis is common in tropical countries like India, however, the cervix is a very rare site. It can mimic carcinoma of cervix on appearance. Histopathological diagnosis must be performed to differentiate between these.
4	Infected cervical fibroid polyp	Cervical polyps tend to occur as finger-like tissue growths. The majority of polyps are benign and are typically asymptomatic. After having intercourse or in between menstrual cycles, certain polyps result in bleeding. In rare cases, polyps can get infected and release a pus-like discharge from the vagina.

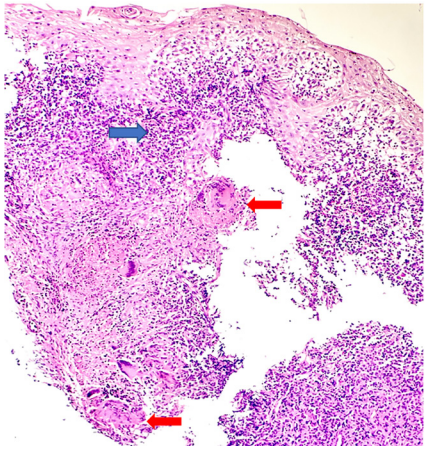

Figure 2. The histopathology stained specimen of cervix shows multiple caseating granulomas with Langhans cells (marked with red arrow) and lymphocytes and plasma cells infiltration of the stroma (marked by blue arrow)

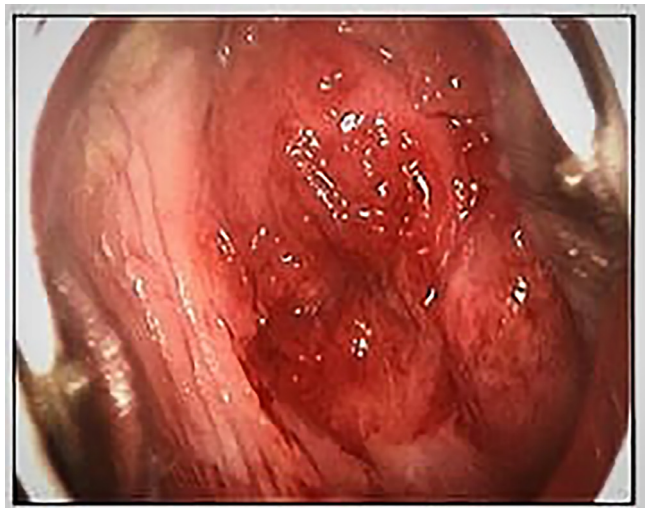

Figure 3. Regression of the growth over two months of antitubercular therapy

Take home message

- Postcoital bleeding is a symptom which should never be ignored and a comprehensive workup must be done.
- In a tropical country, tuberculosis must be ruled out in a young patient presenting with a cervical growth after ruling out malignancy.
- Response to antitubercular therapy must be monitored to rule out resistance.

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