

Cervical TB Mimicking Carcinoma

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Abstract

Background: Tuberculosis of the cervix account for less than 1% of all cases of tuberculosis (TB) and the usual incidence of cervical involvement in genital TB is 5 - 15%. This paper reports Tuberculosis of a cervix in a lady who complains of amenorrhea of 02 years and failure to conceive for 8 years and visited one of the Hospitals in Jimma town for the post coital bleeding and lower abdominal pain.

Case Report: 30 years old, Nulliparous, visited the primary Hospital, Jimma Ethiopia on March 21, 2021, with complaints of Secondary amenorrhea of 02 years duration, lower abdominal pain, and Post-coital Bleeding. She is married for 8years and has not used any form of contraception but is not able to conceive. Her Vital signs are in the normal range and Pelvic and speculum examinations show cervix was obliterated and had a lesion that adhered to the upper third of the vagina. Another physical examination is unremarkable. Biopsy from lesions on the cervix was taken and shows a chronic granulomatous inflammation most likely secondarily to Tuberculosis.

Conclusion: A case of Tuberculosis of the Cervix is presented with literature review.

Keywords: Cervix; Genital Tuberculosis; Tuberculosis

Introduction

TB is the leading infectious disease killer in the world, claiming 1.5 million lives each year. It is a communicable disease which is airborne.

Tuberculosis (TB) is caused by a bacterium called *Mycobacterium tuberculosis*. The bacteria usually attack the lungs, but TB bacteria can attack all parts of the body. All people infected with *Mycobacterium tuberculosis* will not become sick. As a result, two TB-related conditions exist: latent TB infection (LTBI) and TB disease. If not treated properly, TB disease can be fatal. About a 25% of the world's population is infected with *M. tuberculosis* [1].

Genital TB is still a major socioeconomic burden in resource-poor settings. It is only about 5% of TB of the female genital tract (FGT) affects the cervix. Cervical tuberculosis accounts for 0.1 - 0.65% of all cases of TB [2]. The upper genital tract such as the fallopian tubes and endometrium are more frequently affected by tuberculosis [3]. Since cervical tuberculosis is uncommon and clinical mimic cervical cancer we present this case report.

Case Presentation

A 30 years old Nulliparous lady, who is married presented to the Gynecologic clinic with a history of secondary amenorrhea of 02 years duration. Associated with this she has lower abdominal pain and post-coital bleeding. She is married for 8years and has not used any form of contraception but is not able to conceive. She has no other pertinent positive there was no history of pruritis or mass or skin lesion the patient noticed. There was no history of any bowel habit change or urinary complaint. She gave no history TB symptom complex (fever, weight loss or night sweating). On examination, her weight 48 kg, height 160cm and BMI was 18.7. General examination was normal except, Speculum examination revealed easily bleeding and ulcerated cervix which obliterated and densely adhered to the upper vagina. Ultrasound shows normal sized uterus with no adnexal mass. Laboratory investigations including complete blood count, organ function test, and chest X-ray were normal. She is seronegative for retroviral infection. Cervical punch biopsy was done which shows subepithelial granulomatous inflammation, which confirmed to be chronic granulomatous inflammation secondary to Tuberculosis (Figure 1). With the diagnosis of genital tuberculosis anti TB was initiated and she is on follow up. After she was on anti-TB for 2 months no post-coital bleeding abdominal pain subsided. Speculum examination shows significant improvement with no ulcer and cervix clearly visible.



Figure 1: Arrow shows Gross Specimen Picture taken from the cervix of the patient.

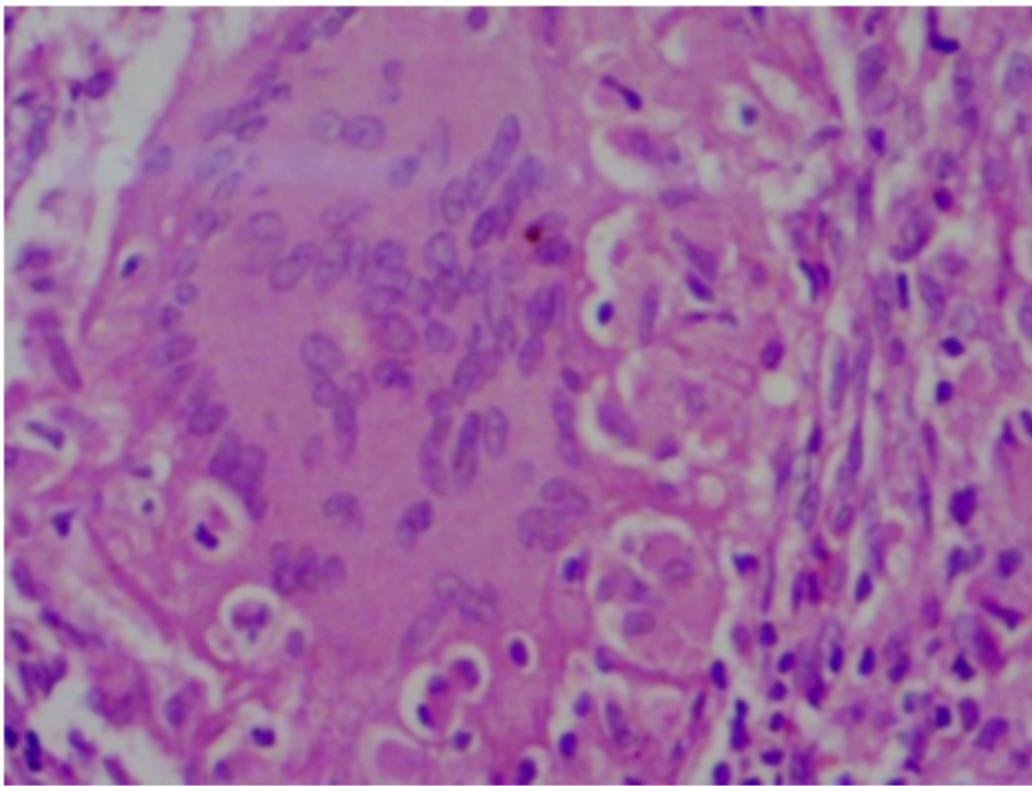


Figure 2: Microscopic image Showing sub epithelial granulomatous inflammatory Cells
Dense plasma cell and lymphocytic cell infiltrates are seen in the background.

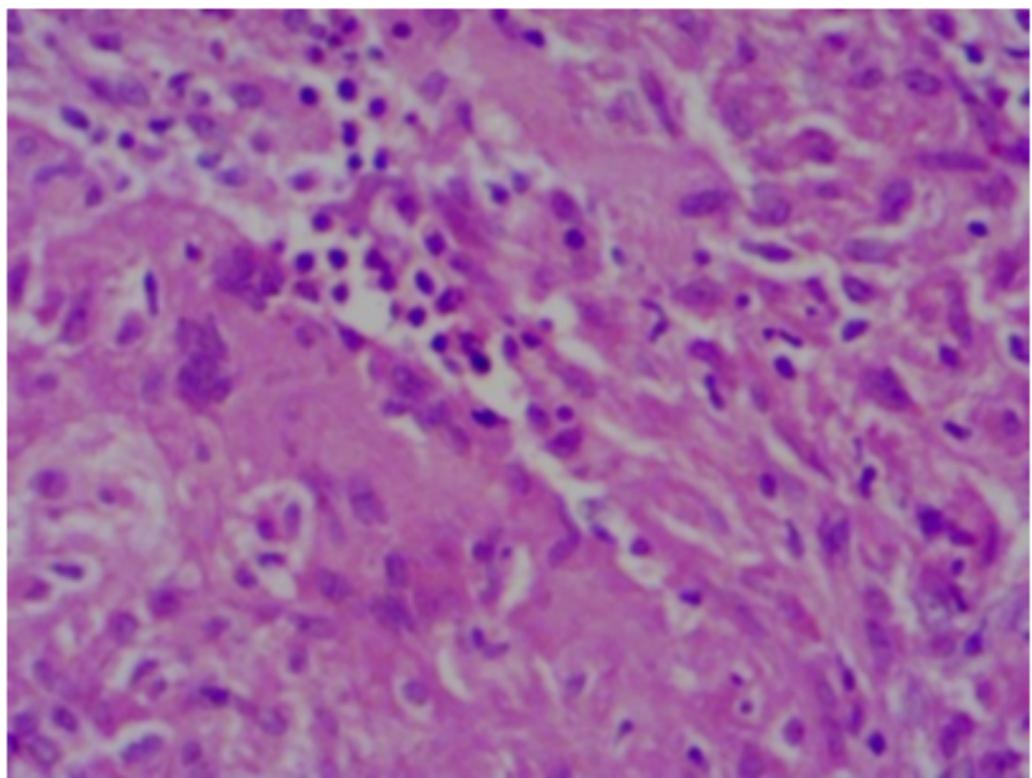


Figure 3: Microscopic image showing Abundant Sub-epithelial granulomatous inflammation,
formed by epithelioid and langhan cells, is identified.

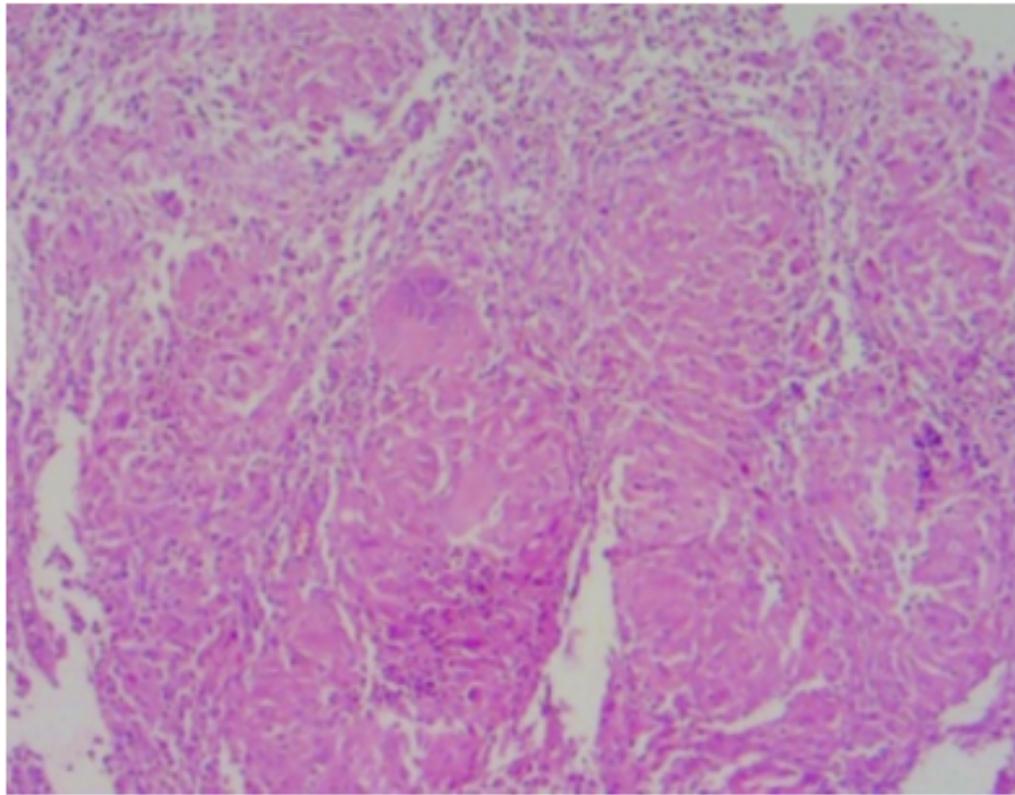


Figure 4: Microscopic Image showing multiple small fragments of inflamed endocervical tissue with papillary surface is identified.

Discussion

TB was recognized as a health problem as far back as 1000 BC. However, the first case of genital TB isolated in 1744 after Morgagni, following a postmortem examination of a 20-year-old lady who died of TB and whose uterus and fallopian tubes examination shows evidence of TB (caseous material) [4]. Even though the word tuberculosis was first used in 1834, Koch did not discover the tubercle bacilli until 1882.

Any organ of the body can be affected by TB, it may not be symptomatic and recurrence is possible [5]. In communities where pulmonary or extra pulmonary Tb is common, it is not uncommon to have genital TB.

TB remains a major health problem in many developing countries, and in these areas, genital TB is responsible for a significant proportion of females presenting with infertility [6].

Determining the real incidence of genital Tb is difficult since up to 11% of the cases are asymptomatic and diagnosed incidentally. Variation in the incidence is known with sociodemographic and the prevalence pulmonary TB [7].

Based on findings of endometrial biopsy, intraoperative samples and autopsy result frequency can be estimated. Up to 10% of patients died from pulmonary TB had concomitant genital TB shown by autopsy studies from by different authors. In a review published in 1976, Schaefer estimated that 5 - 10% of infertile females worldwide have genital TB [8].

The source of infection in the genital TB is commonly the lung through hematogenous spread. The cervix as a part of the genital organ mycobacterium gets access through lymphatic drainage or direct extension. In rare cases, cervical TB may be a primary infection, introduced from a partner with epididymis TB. Using sputum as a sexual lubricant may also serve as route of transmission [3]. The primary focus of infection usually heals without causing symptoms, but later reactions may occur

Most of the time histopathologic examination of cervical biopsy is needed to diagnose cervical TB [9]. Isolation of the mycobacterium from culture media is the gold standard for diagnosis. Only up to 70% of the cases are culture positive. Considering the need for special culture media and high false negative rate the presence of granulomatous cervicitis with no other possible cause can be suggestive TB. The DNA probes primarily save time by providing a rapid alternative to the longer conventional identification process. This technique has high sensitivity but lower specificity.

To diagnose primary genital TB the following criteria is need:

1. The first lesion has involve genitalia
2. Regional lymph nodes and genitalia have to demonstrate same stage disease.

But such cases were not ever fulfilled in the literature review of Auerbach [11].

The involvement of cervix and vagina is uncommon, but if involved lesions are isolated, chronic and ulcerative [12].

A polymorph nuclear inflammatory exudate is the primary response following the host entrance of Mycobacterium bacilli. Mononuclear cells replace polymorph nuclear within two days, after that it will be the primary site of replication for Mycobacterium. As the host immune system develops which is cellular immunity it will destruct the Bacilli then forms caseation necrosis occurs. With weakening of the host immune system reactivation of the primary focus results. This forms proliferative granulomatous lesion, classically with central caseation necrosis [13].

The treatment of extra pulmonary TB, including genital tract TB, is the same as the treatment of pulmonary TB. The initial finding on the cervix can guide the response for the anti TB. Repeating biopsy or other radiologic test can be considered in assessing the response.

Due to the possible tubal and endometrial involvement and scar formation conception following genital Tb is unlikely [14].

Conclusion

Cervical Tb has to be considered as a differential diagnosis of presenting with post coital bleeding in high TB prevalent areas, especially in patient complaining infertility and amenorrhea. Although TB of the cervix is very rare case, when an abnormal looking cervix is found with concomitant complaints of infertility and Amenorrhea in woman of all age groups where incidence of TB is high, TB of the cervix should be considered as a differential diagnosis.

Genital TB is curable and early diagnosis and management may prevent severe tubal and endometrial damage and related infertility.

Competing Interest

The authors declare that they have no competing interest.

Consent

Written informed consent was obtained from the mother for publication of this case report.

Bibliography

1. Moscow Declaration to End TB First WHO global ministerial conference on ending TB in the sustainable development era: a multisectoral response. Geneva: World Health Organization and the Ministry of Health of the Russian Federation (2019).
2. Lamba H., *et al.* "Tuberculosis of the cervix: Case presentation and a review of the literature". *Sexually Transmitted Infections* 78.1 (2002): 63-66.
3. Chowdhury NNR. "Overview of tuberculosis of the female genital tract". *Journal of Indian Medical Association* 94.9 (1996): 345-361.
4. Morgagni JB. "De Sedibus et Causis meorboram". *Epistola* 38 (1744): 34.
5. Varma T. *Glob. libr. women's med.*, (ISSN: 1756-2228) (2008).
6. Muir DG and Belsey MA. "Pelvic inflammatory disease and its consequences in the developing world". *American Journal of Obstetrics and Gynecology* 138 (1980): 913-928.
7. Goldin AG and Baker WT. "Tuberculosis of the female genital tract". *Journal of the Kentucky Medical Association* 83.2 (1985): 75-76.
8. Schaefer G. "Tuberculosis of the female genital tract". *Clinical Obstetrics and Gynecology* 13.4 (1970): 965-998.
9. Koller AB. "Granulomatous lesions of the cervix uteri in black patients". *South African Medical Journal* 49.30 (1975): 1228-1232.
10. Agarwal J and Gupta JK. "Female genital tuberculosis-a retrospective clinico-pathologic study of 501 cases". *Indian Journal of Pathology and Microbiology* 36.4 (1993): 389-397.
11. Auerbach O. "Tuberculosis of the female genital organs". *Surgery, Gynecology and Obstetrics* 75 (1942): 712.
12. Miller JW., *et al.* "Vulval tuberculosis". *Tubercle* 60.3 (1979): 173-176.
13. Daly JW and Monif GRG. "Mycobacteria". In Monif GRG (ed): *Infectious Diseases in Obstetrics and Gynaecology*, 2nd edition. Philadelphia, Harper and Row (1982): 301.
14. Sutherland AM., *et al.* "Transmission of genito-urinary tuberculosis". *Health Bulletin* 40 (1982): 87-91.

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