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CASE REPORT

Tubercular Cervicitis Clinically Mimicking As Carcinoma Cervix: Two Case Reports

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ABSTRACT

Tuberculosis caused by Mycobacterium tuberculosis is a prevalent infectious disease in resource challenged countries such as India. Tuberculosis of the female genital tract accounts for a minority of cases. Tuberculosis can have a varied presentation and can even mimic malignancy on clinical presentation, as illustrated by the following 2 cases. The first case was that of a 58 year old female presenting with a prolapsed uterus and a decubitus ulcer which was posted for surgical repair. However, on surgery, a diagnosis of frozen pelvis was made because of adhesions and suspicion of malignancy was high. In the second case, a 38 year old female presented in the gynaecology outpatient department with complains of menometrorrhagia. Her pelvic examination revealed a friable papillary growth on the cervix. The clinical differentials in this case included neoplastic and viral aetiologies. The histopathological diagnosis in both the cases after taking into consideration the history, clinical findings and other ancillary investigations was given as tubercular cervicitis. Ancillary investigations are necessary to exclude other causes of granulomatous inflammation such as Chlamydia trachomatis, Neisseria gonorrhea, Trichomonas vaginalis and Herpes simplex. Various studies have emphasized that the presence of typical granulomas are sufficient for the diagnosis of tuberculosis if other causes of granulomatous cervicitis are excluded. A high index of suspicion for tuberculosis is justified while dealing with cervical lesions in tuberculosis endemic areas.

Key Words: Cervix, Tuberculosis, Malignancy

Key Messages:

1. In 2005, the World Health Organization reported a prevalence of 20 million cases of tuberculosis worldwide. Out of these, 15 million cases reside in developing countries like India.
2. The most commonly affected regions in genital tuberculosis in case of females are the endometrium and fallopian tubes. Tuberculosis of the cervix includes only 5-24% of genital tract tuberculosis and 0.1% -0.65% of all tuberculosis cases.
3. Tuberculosis can have a varied presentation and can even mimic malignancy on clinical presentation. The differential diagnosis of tuberculosis has to be kept in mind whenever an atypical presentation is encountered in clinical practice.
4. Chronic inflammation with the formation of caseating or non caseating granulomas is evident in most cases.
5. Ancillary investigations are necessary to exclude other causes of granulomatous inflammation such as Chlamydia trachomatis, Neisseria gonorrhea, Trichomonas vaginalis and Herpes simplex. Other rare causes of granulomatous cervicitis include schistosoma, amoebiasis, brucella, tularemia, sarcoidosis and foreign body reactions.
6. The lesion should respond to six months of standard therapy. Serial biopsy specimens usually confirm a therapeutic response.

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Introduction

Tuberculosis caused by Mycobacterium tuberculosis is a prevalent infectious disease in resource challenged countries such as India. Tuberculosis of the female genital tract accounts for a minority of cases. 90% of cases are those of women in the reproductive age group. The most commonly affected regions are the endometrium and fallopian tubes [1],[3]. Tuberculosis of the cervix includes 5-24% of genital tract tuberculosis and 0.1% - 0.65% of all tuberculosis cases[3]. Tuberculosis can have a varied presentation and can even mimic malignancy on clinical presentation. The differential diagnosis of tuberculosis has to be kept in mind whenever an atypical presentation is encountered in clinical practice. The following are 2 cases which presented on clinical examination as malignancy, which turned out to be cases of cervical tuberculosis on the basis of histopathological reports.

Case Reports

Case 1

A 58 year old female presented with complaints of difficulty in urination, defaecation and something coming out of the vaginal os for one month. Her physical examination revealed cystocele and rectocele with third degree descent of the uterus. There was a decubitus ulcer on the anterior lip of the cervix and congestion on the posterior lip.

The routine laboratory investigations were within normal limits. The chest skiagram was unremarkable. An ultrasound examination revealed a retroverted uterus which was normal in shape and size. The endometrial thickness was 5mm. A Manchester repair was planned. The pouch of Douglas was opened and the uterus was found to be adherent. A clinical diagnosis of frozen pelvis was made and malignancy was suspected. The cervix was partially amputated and was sent for histopathological examination.

The histopathological examination revealed hyperkeratosis and acanthosis of the ectocervix along with endocervicitis. The mononuclear inflammatory infiltrate consisted of lymphocytes, histiocytes and macrophages. At places, well formed epithelioid cell granulomas were seen along with Langhans and foreign body giant cell formation. A provisional diagnosis of granulomatous cervicitis was made and ancillary investigations were carried out to find the cause. The AFB stain did not reveal any bacilli.

The patient was investigated for other veneral diseases which also simulate granulomatous pathology such as Chlamydia trachomatis, Neisseria gonorrhea, Trichomonas vaginalis, and Herpes simplex virus. All these investigations did not point towards any of the veneral diseases mentioned above. HIV, HBsAg and HCV tests were non reactive. A hormone profile was normal. ESR was 135 mm after one hour.

The Mantoux test was positive. On the basis of the histological reports and other ancillary investigations, the case was diagnosed as that of cervical tuberculosis and the patient was initiated on anti tubercular treatment. A repeat biopsy three months later was negative for granulomatous pathology. Surgical treatment for prolapse was followed up.

Case 2

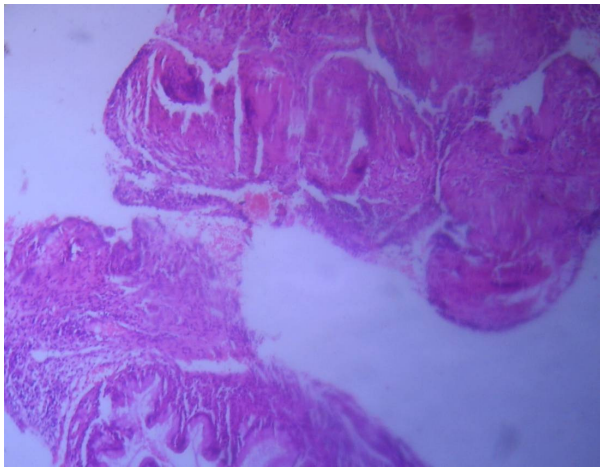
A 38 year old female presented in the gynaecology outpatient with the complaint of menometrorrhagia. Her pelvic examination revealed a friable papillary growth on the cervix. Pap smear revealed a mixed inflammatory infiltrate along with atypical cells of uncertain origin (ASCUS). A punch biopsy was taken for diagnostic confirmation. The clinical

differentials included neoplastic and viral aetiologies.

The histopathological examination revealed endocervicitis with well formed epithelioid cell granulomas along with Langhans giant cell formation and caseation necrosis [Table/Fig 1]. A provisional diagnosis of tuberculosis of the cervix was made. AFB stain did not reveal any bacilli. Further investigations were done to rule out any comorbid conditions. A re- biopsy of the growth was done and the tissue was sent for tubercular polymerase reaction (TB-pcr), which was positive for Mycobacterium tuberculosis.

The patient was started on antitubercular therapy. The growth regressed after four months. A repeat biopsy revealed the absence of granulomatous inflammation. Till the last follow up, the patient was symptom free.

[Table/Fig 1]: Photomicrograph of section of endocervix (↓) showing caseating granulomas and Langhans giant cells (↑) admist chronic inflammatory infiltrate. (H&E 400 X).



Discussion

In 2005, the World Health Organization reported a prevalence of 20 million cases of tuberculosis worldwide. Out of these 15 million cases reside in developing countries [1]. The average prevalence of tuberculosis in India is estimated to be 5.05 per thousand and the average annual incidence of smear positive cases is 84 per 100,00 [2].

The most common presenting symptoms are infertility, amennorhoea and constitutional symptoms. Menstrual irregularities, procidentia with decubitus ulcer and abdominal pain may also be present. A history of contact with a tuberculosis index case is variable[1],[4],[5]. HIV positive patients are at an increased risk of developing these lesions [6].

The affected cervix may be hypertrophied, ulcerated or may show friable papillary growth which mimicks carcinoma. The pap smear may reveal dyskaryosis and may also show the evidence of granulomatous inflammation and giant cell formation. A punch biopsy is required for histopathological evaluation. Chronic inflammation with the formation of caseating or non caseating granulomas is evident in most of the cases. Staining for AFB and culture of the tissue is the gold standard for diagnosis. Ancillary investigations must be carried out to exclude other causes of granulomatous inflammation such as Chlamydia trachomatis, Neisseria gonorrhea, Trichomonas vaginalis and Herpes simplex. Other rare causes of granulomatous cervicitis include schistosoma, amoebiasis, brucella, tularemia, sarcoidosis and foreign body reactions. ESR, Mantoux test and X ray chest also support the diagnosis. Molecular probes are sensitive but not specific [3],[7].

Some studies have emphasized that the presence of typical granulomas are sufficient for the diagnosis of tuberculosis if other causes of granulomatous cervicitis are excluded [3],[6].

Pelvic organs including cervix are usually secondarily affected by haematogenous spread following primary pulmonary infection. The cervix gets involved by direct extension or lymphatic spread. Rarely may tuberculosis be contracted primarily as a sexually transmitted disease [1],[3]. The lesion should respond to six months of standard therapy. Serial biopsy

specimens usually confirm a therapeutic response [3].

Sometimes tuberculosis may coexist with an underlying uterine malignancy, which should be thoroughly investigated [7]. A higher incidence has been reported from areas which are endemic for tuberculosis and where HIV prevalence is more. A high index of suspicion for tuberculosis is justified while dealing with cervical lesions in females of the reproductive age group.

The cases described in this report are both HIV negative. The patient in the first case is postmenopausal, which is a rare presentation. It is thus emphasized, that tuberculosis of cervix must be included in the differential diagnoses, especially in the endemic areas.

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