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*RESEARCH ARTICLE*

# CERVICAL TUBERCULOSIS MIMICKING MALIGNANCY: CASE REPORT

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## *Abstract*

Cervical tuberculosis is an uncommon condition that often mimics cervical cancer in clinical presentations, leading to potential misdiagnosis. The definitive diagnosis is typically established through biopsy, which allows for the identification of characteristic histopathological features. Medical management is the primary approach for treating cervical tuberculosis, involving the use of antitubercular therapy tailored to the patient's needs. However, the prognosis for young women diagnosed with this condition can be complicated by the risk of infertility, especially in cases where there is concurrent involvement of the uterine tubes.



## Introduction:-

Cervical tuberculosis is a rare condition in Western countries, although its incidence may rise in cases of co-infection with the human immunodeficiency virus (HIV). In addition to the concerns surrounding genital tuberculosis and the associated risk of secondary infertility, cervical tuberculosis can present with a pseudotumoral appearance, making it a differential diagnosis for cervical cancer.

**Case report:**

A 29-year-old woman, whose sister was undergoing treatment for pulmonary tuberculosis, was referred for persistent leucorrhoea that had not responded to standard treatments. This case unfolded against the backdrop of three years of primary infertility. Upon clinical examination, the patient appeared to be in good general health, afebrile, and weighed 45 kg, with a height of 1.63 m. A speculum examination revealed an ulceration on the upper lip of the uterine cervix.

Colposcopy findings showed an acetowhite area that was iodine-negative on the upper lip, indicating a potential repair zone. The transformation zone was clearly visible and appeared free of atypical vascularization, which is often a concerning sign in cervical pathology. To clarify the diagnosis, a biopsy was performed. Histopathological analysis revealed epithelioid and giant cell granulomas accompanied by caseous necrosis, confirming the suspicion of tuberculosis. Subsequent cultures returned positive for Mycobacterium tuberculosis.

Further diagnostic investigations, including hysterosalpingography, identified bilateral tubal obstruction, which is significant in the context of fertility challenges. Both intravaginal ultrasound (IVUS) and chest X-ray results showed no abnormalities, ruling out extragenital tuberculosis or other complicating factors.

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The patient was initiated on a standard antituberculosis treatment regimen (2ERHZ/4RH), which showed favorable progression over time. However, despite the positive response to treatment, the prognosis remained poor, primarily due to the complications associated with the bilateral tubal obstruction and the underlying infertility.

This case highlights the complexities of diagnosing cervical tuberculosis, especially in young women with reproductive health concerns. It underscores the importance of thorough clinical evaluation and the need for a multidisciplinary approach to manage both the infectious disease and its reproductive implications effectively.

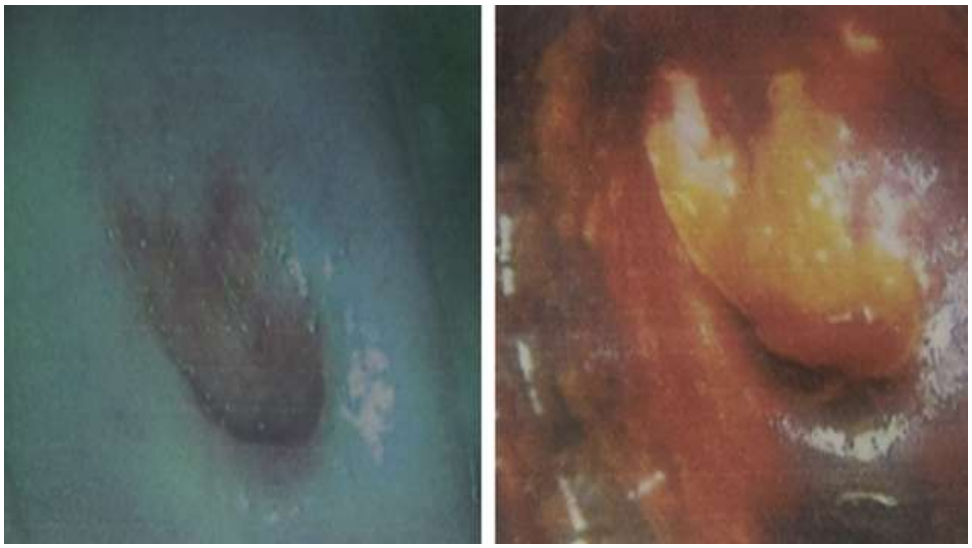

**Figure 1:**Colposcopic images displaying the acetowhite, iodine-negative lesion located on the anterior lip of the cervix.

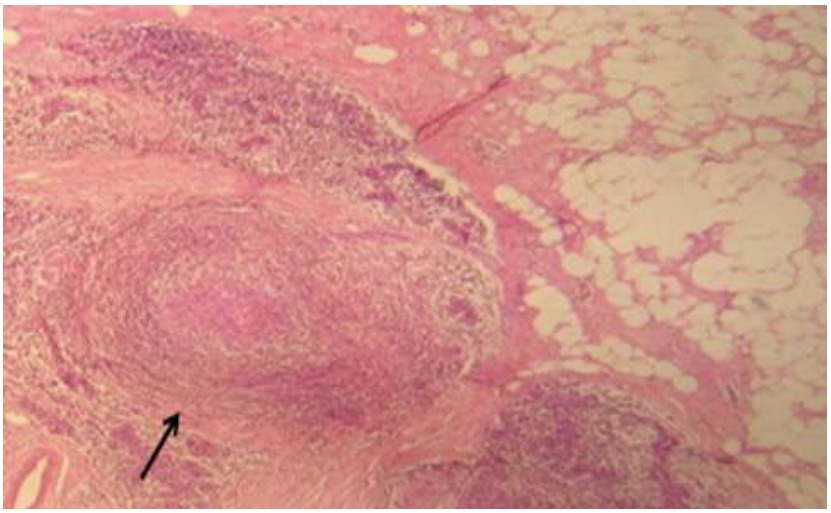

**Figure 2:**- Microscopic view of epithelioid and giant cell granulomas exhibiting caseous necrosis, indicated by black arrows.

## Discussion:-

The pseudo-tumoral cervical localization of tuberculosis is a rare clinical form, with an estimated prevalence of 2.5% to 7.7% according to various studies. This frequency is notably higher in HIV-positive individuals, potentially doubling or tripling in this population[1].

Cervical tuberculosis can affect individuals across all age groups, but it predominantly occurs in women aged 20 to 50 years. The transmission of Mycobacterium tuberculosis to the cervix typically occurs through lymphatic dissemination or by direct extension from genital tuberculosis, which may itself arise from hematogenous spread

following an often-unnoticed primary pulmonary infection. In rare cases, cervical tuberculosis could be sexually transmitted by a partner with epididymal or urogenital tuberculosis[2].

A significant factor contributing to cervical involvement is the absence of vaccination, alongside other elements such as poor hygiene and socio-economic instability.

Clinically, the signs of cervical tuberculosis are non-specific, often presenting as either spontaneous or provoked metrorrhagia and resistant leucorrhoea. In addition to the pseudo-tumoral presentation, characterized by an enlarged cervix with ulcerated areas, other forms have been described, including vegetative, miliary (with yellow translucent granulations a few millimeters in diameter), interstitial (where the cervix is infiltrated throughout its thickness by granulomas), and polypoid forms[1].

Histologically, the presence of lympho-plasmacytic granulomas with multinucleated giant cells (Langhans cells) in association with central caseous necrosis is highly indicative of tuberculosis. However, similar findings can also appear in other benign conditions, such as venereal granulomatosis, sarcoidosis, schistosomiasis, or foreign body reactions. Therefore, the definitive diagnosis relies on the identification of acid-fast bacilli using the Ziehl-Neelsenstain[3].

The treatment for cervical tuberculosis is primarily medical, consisting of a daily four-drug regimen that includes Isoniazid, Rifampicin, Ethambutol, and Pyrazinamide for two months, followed by a four-month maintenance phase with a daily two-drug therapy of Isoniazid and Rifampicin[3].

Surgical intervention should be reserved for addressing complications such as fistulas or abscesses and may also be considered in cases of resistance or relapse despite appropriate medical treatment. This comprehensive approach underscores the need for early diagnosis and effective management to mitigate the potential reproductive health impacts of cervical tuberculosis[4].

## Conclusion:-

In conclusion, cervical tuberculosis, although rare, presents significant clinical challenges, particularly in young women of reproductive age. Its pseudo-tumoral form can mimic malignancies, leading to diagnostic confusion and potential delays in treatment. The rising incidence among immunocompromised individuals, especially those with HIV, highlights the need for heightened awareness and early detection. Effective management primarily relies on a standardized medical treatment regimen, but surgical intervention may be necessary for complications or treatment failures. Addressing underlying risk factors such as vaccination status, hygiene, and socio-economic conditions is crucial in preventing cervical tuberculosis. Overall, a multidisciplinary approach is essential for optimizing patient outcomes and preserving reproductive health.

**List of figures :**

**Figure 1 :**Colposcopic images displaying the acetowhite, iodine-negative lesion located on the anterior lip of the cervix.

**Figure 2:** Microscopic view of epithelioid and giant cell granulomas exhibiting caseous necrosis, indicated by black arrows.

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