

# Tuberculosis of the cervix and infertility: report of a rare case

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## Summary

Tuberculosis is a frequent bacterial infection in less developed countries. Lung and lymph node localisations are common, while the genital apparatus is less involved. In this work a rare case of cervical tuberculosis followed by some lesions causing infertility in a 20-year-old woman is reported. The diagnosis was confirmed by a histological examination from a biopsy of the cervix. The patient was offered six-month antituberculosis therapy which eliminated the cervical lesions. A few years later she came under our care for infertility due to uterine adhesions diagnosed by hysterosalpingography. Now the patient is being treated for infertility complicated by amenorrhoea.

**Key words:** Tuberculosis; Cervix; Infertility.

## Introduction

Tuberculosis (TB) is a bacterial infection, particularly frequent in less developed countries where it rages in an endemic state. Through the years a substantial reduction in its incidence has been observed, but with the outbreak of the HIV/AIDS pandemic, there has been a recrudescence of TB, particularly in non-traditional sites. While pulmonary and lymph node localisations are frequent, an internal genital localisation is still rare: 2.5% to 7.7% according to different authors [1-4].

The aim of our work was two-fold:

- To describe a rare case of genital TB, by stressing the pitfalls that can present with cervical lesions.
- To reexamine, in light of the mainstream literature, the characteristics of this localisation, disease management, and factors influencing the prognosis.

## Case Report

The 20-year-old unemployed patient, had been examined in January 2001 by the Service of Gynaecology of CHU Treichville (Abidjan-Ivory Coast) for vaginal bleeding of three months' duration.

Physical examination showed absence of sexual intercourse, and the general examination highlighted weight loss (height 1.58 m-weight 48 kg), and clinical anaemia confirmed by bioassay (rate of haemoglobin to 9.8 g/dl).

Gynaecological examination revealed a budding cervical tumour of the cervix which was friable and bleeding on contact. Rectal examination found a normal sized uterus with supple parameters and rectovaginal wall.

Ultrasonography (US) of the pelvis revealed an empty uterus of regular size and echo-structure. While the left ovary was

normal, the right ovary contained a transonic formation with posterior reinforcement compatible with an organic cyst, measuring 52 x 49 mm. The right ovary measured 65 mm. The Douglas pouch was free of fluid. Pulmonary radiography and HIV serology showed normal values. Given the data cancer of the cervix was suspected.

Biopsy samples of the cervical tumour were collected and analysed. The typical histological aspect indicated cervical tuberculosis (Figure 1).

Medical treatment, based on antitubercular medications (rifampicin, isoniazide, pyrazinamide), was administered for six months by the Pneumology Department.

The evolution was favourable characterised by:

- rapid improvement of the overall condition.
- interruption of the bleeding after two months of treatment.
- a normal gynaecological examination (apparently healthy cervix) after six months of treatment.

The patient was discharged and readmitted six years later, at the age of 26, for infertility with amenorrhoea.

US examination of the pelvis was normal. Hysterosalpingography showed widespread adhesions of the uterus with fallopian tube involvement.

Hysteroscopy could not be done because the Gynaecology Department did not have the appropriate equipment.

The patient's infertility is presently being studied.

## Discussion

The literature review revealed that cervical tuberculosis has been the topic of a limited number of publications, which suggests the existence of a limited number of cases. The cervical localisation of this pathology is found with a frequency ranging from 2.5 to 7.7% for uterine lesions [1-4]. The frequency of genital TB is probably underestimated due to the fact that it normally spreads in endemic forms in less developed countries, but also because latent forms are frequent [1].

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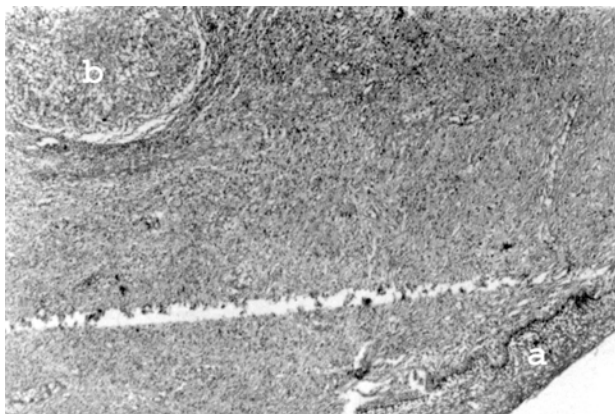


Figure 1. — Cervical biopsy: (a) cervical squamous epithelium, (b) epithelioid granuloma.

In developing countries this pathology usually affects sexually active young women in 72% of the cases [1, 2, 3, 5], while in developed countries genital TB is mainly found among older women, in 62% of the cases [1]. In our case the patient was just past adolescence (20 years).

Concerning the diagnosis, the literature review showed that the clinical signs revealing a cervical localisation of tuberculosis are not highly specific. Besides the pseudo-tumor presentation (most frequent), vegetating or papillary TB, miliary TB (yellow and translucent granulations), interstitial TB (cervix penetrated in all its thickness by granuloma) and TB with intracervical polyps have also been described [1, 6, 7].

In our case all the signs – spontaneous vaginal bleeding, a budding cervical tumour, and bleeding on contact made us suspect cancer of the cervix. The diagnosis was obtained by histological study of a biopsy which highlighted the typical damage of cervical TB, like granuloma lymphocytes with giant multinucleate cells (Langerhans cells) associated with a central caseous necrosis.

Although this type of damage can also be found in other benign pathologies such as venereal granulomatosis, sarcoidosis, schistosoma and in reactions to external substances, its presence justifies the immediate administration of treatment without waiting for the certainty obtained through direct examination or after culture that highlights *Mycobacterium tuberculosis* [1].

In our case the clinical improvement after the beginning of the “trial” treatment confirmed the successive diagnosis. The extension of diseases estimated by pulmonary radiography and abdominal US resulted negative. Hysterosalpingography, carried out six years after the treatment, highlighted the lesions of the uterine cavity and fallopian tubes, e.g., adhesions.

Isolated localisation of the cervix is possible but rare, following lymphatic or adjacent dissemination starting from a secondary genital TB resulting in haematogenous dissemination of pulmonary TB [1, 2].

Pulmonary TB was not found in our patient. Possible sexual contamination from a partner affected by epididymal or urogenital TB was not considered in our case

because the patient reported no sexual relations and did not present signs of defloration.

In our case, the medical treatment containing anti-tubercular medication led to an improvement in the state of the cervix with complete recovery after six months.

In genital localisations of tuberculous lesions, especially when the fallopian tubes are involved, the prognosis is characterised by infertility (44%) requiring reproduction techniques (ART) [1].

Sterility can be irreversible (from 10-15%) in case of widespread uterine lesions as intrauterine adhesions responsible for primary or secondary amenorrhoea, like in our patient.

Our case suggests that the patient would benefit from ART after treatment of the uterine adhesions, however due to the high cost of this technique in contrast to its poor results the situation is difficult [7].

## Conclusion

In less developed countries, cervical lesions in young women should lead to the consideration not only of cancer, but also TB of the cervix, even though this localisation is rare.

The diagnosis is provided in the majority of cases by cervical biopsy which makes it possible to start medical treatment containing antitubercular medications.

In young patients the prognosis is characterised by an elevated risk of infertility due to an complete attack on the genital tract.

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