

Tuberculosis of the Uterine Cervix: About a Case and Literature Review

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Abstract

The authors report a case of tuberculosis of the uterine cervix observed at the maternity unit of the Souro Sanon Teaching Hospital (CHUSS) of Bobo-Dioulasso. This is a rare localization of genital tuberculosis and can take the appearance of a cervical cancer. Biopsy with histological study of the lesion confirms the diagnosis. The frequency of this pathology can reach up to 8%. The extension to the endometrium and/or tubes in a young woman may compromise future fertility. Early and well conducted TB treatment allows the ad integrum restitution cervix.

Keywords

Tuberculosis, Cervical Biopsy, Genital Tuberculosis

1. Introduction

Genital tuberculosis is a rare disease in developed countries. In sub-medicalized countries, it still remains a concern especially with the advent of HIV [1]. Tuberculosis of the cervix is a rare location that evolves either as a banal disease [2], or as a pathology that can evoke a cervical cancer [3]. The biopsy and the histological study of the specimen confirms the diagnosis [4]. We report a clinical case diagnosed in our department. The clinical features of this location, the diagnostics, the therapeutics and the prevention of the disease are discussed. Genital and extra-genital investigations are needed before any treatment.

2. Observation

Mrs. K. J. 45 years old, gravida 4, para 4 with 4 living children, was seen in gynecological consultation in May 2012 with complaints of vaginal discharge associated with irregular vaginal bleeding.

In the past medical history, we noted:

- A concept of contagion with the presence in 2010 in his immediate surroundings of a relative who had a pulmonary tuberculosis and died later.
- In 2011, she presented a right pleural effusion, peritoneal and pericardial effusions associated with asthenia. She was treated with antibiotics, research bacillus came back negative.
- In January 2012, she presented with secondary amenorrhea and a vaginal discharge, which are not improving on treatment. A pelvic ultrasound scan performed revealed endometrial proliferation without suspicious signs of malignancy and the etiology of which was to be searched. It is in this context that she came to the gynecological consultation.

On Physical Examination

The general condition was preserved, colored mucous, soft abdomen. At speculum examination, the cervix showed ulceration of the posterior lip, irregular edges, bleeding on contact. Scanty vaginal discharge was noted. On vaginal examination, the uterus was gynecological size, not tender to the mobilization and ulceration of the cervix was not indurated at its base. The rest of the examination was unremarkable. HIV serology conducted was negative. We performed a cervical biopsy with histological examination which revealed in the lamina propria many follicles epithelioid and Langhans giant cells type. They are focally centered by necrosis. The conclusion of uterine cervix tuberculosis was made. Anti bacillary quadruple antibiotic therapy combining Rifampicin, Isoniazid, pyrazinamide and the Ethambutol was conducted for 8 months, from June 2012 to February 2013. Three months after completing the treatment, her menses resumes. An ultrasound scan has noted the total disappearance of the endometrial lesions. The outcome was favorable after 8 months (**Picture 1**).



Arrow: tumor lesion with softened base and bleeding on contact

Picture 1. Cervical tuberculosis macroscopic appearance.

3. Discussion

3.1. Epidemiology

Tuberculosis of the uterine cervix is an uncommon location and represents 2.5% to 7.7% of genital tuberculosis [5]. The frequency of genital tuberculosis is probably underestimated because the disease is in endemic state in developing countries [6] [7]. The advent and expansion of the HIV could increase TB case in its various locations, even in developed countries because of the decreased of patient's immunity [8]. The cervical spine is most often associated with other genital locations, including tubo-ovarian [7].

The diagnosis of genital tuberculosis is usually made in a woman of reproductive age. However it can occur at any age, from pre-puberty to menopause. In the young girl in pre-pubertal period, TB is responsible for adhesions with primary amenorrhea, difficult to cure. This clinical picture makes Asherman's Syndrome. In postmenopausal period, tuberculosis of the uterine cervix is a real diagnostic problem with the cervical cancer or endometrial cancer [3].

3.2. Routes of Contamination

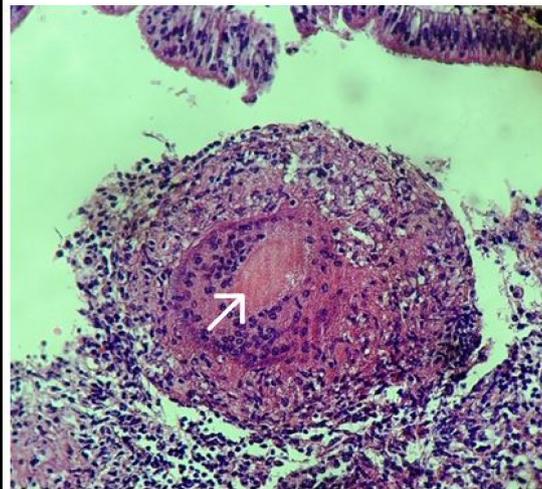
The route of contamination can be direct, by inoculation of the bacillus to the cervix, thus constituting the primitive form of this location. This form could be transmitted by a partner suffering from epididymal or urogenital tuberculosis [9]. Usually it is secondary to lymphatic dissemination or contiguity from a genital tuberculosis, itself secondary to hematogenous spread from a pulmonary localization. Our patient had a right pleural effusion in 2011 and secondary amenorrhea in January 2012 which speaks for a secondary type of tuberculosis.

3.3. Pathological Anatomy

Macroscopically, the lesion in our patient had an ulcer appearance suggestive of cervical cancer, and this ulcerative form could be less frequent [3]. The tumor-like form is also found with an enlarged cervix, with or without ulcerated areas. The military form represents about 7% of cases with the presence of few millimeters lining of yellowish granules or translucent [3]. Finally, the interstitial form that seems exceptional and has an enlarged cervix which is infiltrated throughout its thickness by tubercular nodules that can form abscesses and is able to lead to fistulae in the vagina (**Picture 2** and **Picture 3**).

3.4. Symptomatology

The clinical symptoms of cervical tuberculosis are often poor, translating either with common vaginal discharge not responding to treatment or by induced or spontaneous vaginal bleeding. In the case of our patient, the symptomatology was dominated by vaginal discharge and spontaneous bleeding not responding to treatment. Endometrial lesions seen on ultrasound, associated with the vaginal discharge is in favor of endometrial and cervical tuberculosis. An endometrial biopsy could confirm it.

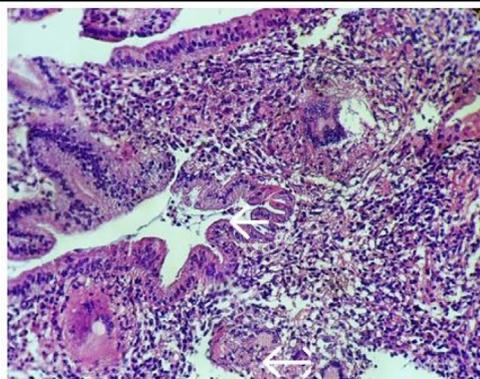


-**Micrograph 1:** epithelioid granuloma centered with cell necrosis. HES, 200X

-**Arrow:** Necrosis

-**Source:** pathological anatomy department of Yalgado Ouédraogo Teaching Hospital in Ouagadougou (Burkina Faso)

Picture 2. Microscopically.



-**Micrograph 2:** Langhans giant cells types (single arrow), with an endocervical gland (double arrow). HES, 200X

-**Single Arrow:** Langhans giant cell

-**Double arrow:** endocervical gland

-**Source:** pathological anatomy department of Yalgado Ouédraogo Teaching Hospital in Ouagadougou (Burkina Faso)

Picture 3. Microscopically.

3.5. Diagnosis and Investigations for Spreading

Concerning additional investigations for the diagnosis and extension, the following tests could be performed:

- Intradermo-tuberculin (IDR) which is an element of presumption, but its negativity does not rule out tuberculosis. Our patient tested positive to 19 mm.

- The biopsy and histology study of the biopsy sample confirms the diagnosis: in the case of our patient the results showed in the lamina propria many epithelioid follicles and Langhans-type giant cells. They are focally centered by necrosis. The conclusion of uterine cervix tuberculosis was made.
- The chest X-ray to check for lung or pleural location: Our patient presented in 2011 a right pleural effusion. The history of pericardial and peritoneal effusion was probably in the same order of multiple locations of tuberculosis, although research of bacillus was negative.
- The hysterosalpingographie, apart from its contra indication, because of its invasive nature can show: Pelvic calcifications; a partial or complete uterine synechia; a rigid appearance of the tubes, tubal caliber's abnormalities, a proximal or distal tubal obstruction. A hydrosalpinx may correspond to a tubal abscess. All these anomalies are could lead to infertility in women of childbearing age. In the case of our patient, aged 45 years, this investigation was not performed. Resumption of menses 3 months after the end of treatment is an argument in favor of unconfirmed endometrial tuberculosis.

Intravenous urography (IVU) is an examination indicated in the staging of genital tuberculosis can show images of tuberculosis. The use of cystoscopy may be considered in case of urinary signs and rectoscopy and abdominopelvic computed tomography in case of digestive symptoms.

On the biological side, complete blood count (CBC) may show a lymphocytosis and an increased erythrocyte sedimentation rate (ESR) which could be used for the monitoring of treatment efficacy.

3.6. Treatment of the Cervical Tuberculosis

The treatment of tuberculosis of the cervix is essentially based on antibacillary bactericidal drugs (Rifampicin, Isoniazid, pyrazinamide, streptomycin) and antibacillary bacteriostatic drugs (Ethambutol, Ethionamide). The efficacy and safety of treatment should be carefully monitored. The surgical management of uterine adhesions currently imposes a hysteroscopy to improve fertility patients [10]. The use of surgical treatment should be reserved for the management of complications (fistulas or abscesses) or in case of resistance or relapse in well conducted medical treatment. This surgery can lead to amputation of the cervix or total hysterectomy. This treatment must be preceded and followed by drug treatment.

The post treatment surveillance of tuberculosis of the cervix requires regular speculum examination and control biopsies, if necessary. In our patient, the disappearance of vaginal discharge, gross lesions, normalization of the cervix were the criteria of good outcome. The return of menses three months after completion of therapy is a healing criterion for the endometrial location.

3.7. Prevention of Cervical Tuberculosis

Prevention is the best achieved by immunization with the BCG vaccination, a healthy

lifestyle, early detection in the event of family or professional TB contact. All cases of TB diagnosed should be treated regardless of the location.

4. Conclusion

Cervical tuberculosis is an uncommon genital location. In the ulcer or tumor-like form, it poses a problem of differential diagnosis with cervical cancer. The biopsy results help to confirm the diagnosis. The case of our patient is probably multifocal tuberculosis with secondary genital location in endometrium and cervix. Early drug treatment resulted in complete healing with ad integrum. The best prevention is vaccination.

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