Case Report

Post-menopausal endometrial tuberculosis mimicking carcinoma: An important differential diagnosis to consider

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ARTICLE INFO

Article history:
Received 30 March 2013
Received in revised form
11 April 2013
Accepted 15 April 2013
Available online 10 May 2013

Keywords:
Genital tuberculosis
Menopause
Endometrial tuberculosis

ABSTRACT

We report the case of a menopausal 74-year-old patient who presents pyorrhoea for 6 months. We suspect initially a carcinoma process, but the anatomopathological examination takings obtained by biopsy curettage of the endometrial under hysteroscopy is in favor of an inflammatory infiltrate with epithelioid and giant cells of type Langhans and type Muller without caseous necrosis. The bacteriological direct examination after coloring of Gram, Ziehl–Neelsen and Sabouraud was negative. The bacteriological culture in the Löwenstein and Coletos environment identified Mycobacterium tuberculosis. The searches for another source of the infection was negative both at the pulmonary and urinary levels. An antituberculous quadritherapy allows the fast clinical improvement.

The tuberculosis remains frequent but rarely genital. It is especially the case of young women, from non industrialized countries, consulting for infertility. It is necessary to know how to evoke it front pelvic symptoms, whatever the age is and to realize easily mycobacteriological examinations.

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Introduction

The prevalence of genital tuberculosis (TB) varies from 1% to 19% depending on countries. The rate might be even higher among patients with tubal factor infertility (39–41%) [1]. The most involved organs are the fallopian tubes (95–100%), the endometrium (50–60%), and the ovaries (20–30%), respectively [2].

Usually, patients with genital TB may have evidence of tubercular lesions elsewhere in the body or they may not have any history at all. The Monteux test cannot provide an accurate diagnosis. If the chest X-rays are normal, the pelvic ultrasound and hysterosalpingography examination may aid in the diagnosis. In the present study, the report of a 74-year-old menopausal woman with tubercular endometriosis is outlined below.

Observation

A menopausal 74-year-old patient living in a rural area without previous or family history of TB presented with pyorrhoea for 6 months. Initially a carcinoma was suspected.
The pelvic ultrasonography objectified a womb increased in volume with echogenic fluid in the uterine cavity. (Fig. 1) The anatomopathological examination of the endometrium was performed by viewing a biopsy curettage of the endometrium under hysteroscopy indicating an epithelioid granuloma and giant cells of the types Langhans and Muller, with caseous necrosis (Figs. 2–5). The bacteriological direct examination after coloring with Gram, Ziehl–Neelsen (ZN) and Sabouraud were negative. The bacteriological culture in Löwenstein-Jensen and Coletos mediums identified Mycobacterium tuberculosis. The intradermoreaction with tuberculin was positive. The search of another infectious source was negative at both the pulmonary and urinary levels. An anti-tuberculous quad-therapy using Rifampicin (10 mg/kg/j), Isoniazid (5 mg/kg/j), Ethambutol (20 mg/kg/j) and Pyrazinamide (25 mg/kg/j) was established for 2 months, relieved by a double-agent therapy of Rifampicin (10 mg/kg/j) and Isoniazid (5 mg/kg/j) with a good clinical and biological tolerance.

Discussion

The genital TB found in Morocco constitutes the fourth extra-lung localization after the ganglion, digestive and osteo-articular localizations. The endometrial localization remains exceptional. It is the privilege of the immunosuppressed subjects.

The pathogenic agent is the Koch bacillus: M. tuberculosis. The mode of contamination is dominated by the hematogenous route resulting from another initial host. Genital TB is characterized by the frequency of the latent forms, and the motives for consultation are diverse, dominated by infertility. Abdominal and vaginal examinations may be normal. A high erythrocyte sedimentation rate and a positive Mantoux test are non-specific, and therefore cannot provide an accurate diagnosis of genital TB. Chest X-rays are normal in most cases, however, pelvic ultrasound and
Tubercular endometritis is a rare gynecological affliction. Histopathological evidence from biopsies of tubercle bacilli in cultures of menstrual blood or endometrial curetting is necessary to provide a conclusive diagnosis of the disease [3-5]. In this study, pulmonary lesions were not seen in the reported case. The patient denied contact with active TB. A chest X-ray was not performed for this patient, as there were no symptoms to indicate its necessity. ZN staining of AFB (acid-fast bacilli) requires a large number of bacteria to be present in the specimen [6]. In this case, both histopathological and microbiological studies showed positive ZN staining for AFB, and this was the main diagnostic method that confirmed the clinical diagnosis. Newer techniques such as polymerase chain reaction (PCR) can detect genital tuberculosis from clinical samples earlier and are less invasive [7]. However, most of these techniques are too expensive and complicated to be of any practical benefit to the vast majority of TB patients living in developing countries.

Ghosh et al. [8] have reported a case of coexisting genital TB and endometriosis, but neither of their cases showed tubercular foci in areas of endometriosis in the endometrium. They mentioned the uterus to be normal. The present case has a rare presence of tubercular granulomas in the endometriotic focus.

In females with endometriosis, during menstruation, endometrial expression of tumor necrosis factor-α, interleukin 8 and matrix metalloproteinase-3 messenger RNA (mRNA) levels are high, and consequently, periosteal expression of transforming growth factor-β, interleukin-6, and intercellular adhesion molecule-1 mRNA are also significantly higher. These pro-inflammatory mediators bathing the genital organs could have led to exaggerated tissue responses to TB infection, resulting in huge adnexal masses [9].

The complications of the tubercular endometritis are dominated by infertility. In case of pregnancy, the TB of the endometrium can be responsible for spontaneous miscarriage, for extra-uterine pregnancy and for premature deliveries.

The treatment of pelvic TB is essentially medical. In accordance with the World Health Organization recommendations, a 6-month treatment course was initiated beginning with an intensive 2-month quad-therapy consisting of Isoniazid, Rifampicin, Ethambutol and Pyrazinamide, followed by a 4-month maintenance treatment consisting of a daily double-agent therapy of Isoniazid and Rifampicin [10].

The patient’s compliance to the treatment is essential, with the main drawback being resistance to the treatment and relapse.

The surgical treatment addresses the resistant adnexal masses in the medical treatment and in the endoscopic cure of synchia.

The forecast of pelvic TB is bound to the infertility of the young women. The risk of tubo-ovarian infertility is estimated at 39% [8,9].

**Conclusion**

Tubercular endometritis is a rare gynecological affliction. The general outcome remains good, but fertility continues to remain a quasi-inevitable condition.

**Consent**

Written informed consent was obtained from the patient for the publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

**Competing interests**

The authors declare that they have no competing interests.

**Authors’ contributions**

E.S. was the major contributor in writing the manuscript. N.H. analyzed and interpreted the patient’s data. H.F. performed the histological slide preparation and interpretation and reviewed and interpreted the biomedical imaging results. H.S., C.B. and A.A. and A.B. the senior authors who performed the surgery, contributed and supervised the writing of the manuscript. All authors read and approved the final manuscript.

**REFERENCES**