

TUBERCULOSIS OF FEMALE GENITAL TRACT: ABOUT 5 CASES AND REVIEW OF LITERATURE

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ABSTRACT

Female genital tuberculosis is a rare condition, affecting mostly young women. It is mainly seen in developing countries. The aim of this study is to describe the epidemiological and pathological aspects of female genital tuberculosis.

This is a retrospective and descriptive study of genital tuberculosis diagnosed in women, over a period of 5 years and half, from January 2014 to June 2019. We included the locations on the genital tract and excluded the other locations.

We recruited 369 cases of extra-pulmonary tuberculosis and selected 5 cases of female genital location. The age of the patients ranged from 14 to 48 years, with an average of 28.8 years. The locations were cervical (2/5), uterine (2/5) and tubal (1/5). The morphological aspect was typical with epithelioid granulomas, Langhans giant cells with caseous necrosis in 2 cases, without caseous necrosis in 3 cases. In one of the cervical cases, there was associated with high-grade intraepithelial neoplasia.

Female genital tuberculosis is a rare form of extra-pulmonary tuberculosis. The diagnosis is histological. The morphological aspect can sometimes pose differential diagnoses requiring a confrontation with the clinic or other specific examinations.

Key words: *Tuberculosis, Woman, Genital, Anatomic pathology, Madagascar*

INTRODUCTION

Tuberculosis (TB) remains a major public health problem globally, especially in developing countries [1]. Female genital tuberculosis (FGTB) is a rare form of tuberculosis affecting women of reproductive age. The incidence varies from country to country. It is 1% in Australia, 1 - 19% in India [2]. Few cases have been published in the Malagasy literature like that a study of Rakotomahenina et al about 2 cases [3] and that of Ravelosoa et al about 11 cases [4].

We report a retrospective series of 5 cases of FGTB histologically diagnosed at our pathology department.

The aim of this study is to describe the epidemiological, the clinical and the anatomo-pathological aspects of genital tuberculosis in women.

PATIENTS AND METHODS

We carried out a retrospective and descriptive study of cases of female genital tuberculosis diagnosed at the UPFR of Pathological Anatomy and Cytology of the CHU-JRA over a period of 5.5 years, ranging from January 2014 to June 2019. We included the tuberculosis of the female genital tract and excluded other localizations.

RESULTS

During the study period, we recruited 369 cases of extra-pulmonary tuberculosis (PET) and retained 5 cases of female genital tuberculosis representing 1.35% of PETs. The average age was 28.8 years with extremes of 14 and 48 years. Clinical manifestations were hydrorrhea, postcoital bleeding, uteroparietal fistula, amenorrhea, and upper genital infection. The samples received were a biopsy (60%), endometrial curettage (20%) and resection (20%). According to the histologic findings, tuberculosis was the diagnosis in all cases. These epidemiological, clinical and anatopathological aspects are presented in Table 1.

Table I. Clinico-pathological characteristics of our patients

Case	Age	Clinic	Genital site	Specimen	Macroscopic aspect	Histology
1	48	Hydrorrhea, VIA* +	Cervix	Biopsy	Multiple fragments	Appearance compatible with tuberculosis
2	38	Post coital bleeding	Cervix	Biopsy	Multiple fragments	High grade intra-epithelial neoplasia and tuberculosis
3	14	Utero-parietal fistula	Endometrium	Biopsy	Multiple fragments	Caseo-follicular tuberculosis
4	27	Secondary Amenorrhea + uterine synechia	Endometrium	Biopsy	Multiples fragments	Suspicious appearance of tuberculosis
5	17	Chronic upper genital infection, tubo-ovarian mass	Fallopian tube	Surgical	Necrosis, haemorrhage	Caseo-follicular tuberculosis

*VIA : Visual Inspection after application of Acetic acid

DISCUSSION

Female genital tuberculosis is relatively rare. We recruited only 5 cases in 5½ years, representing 1.35% of extra-pulmonary tuberculosis during the study period. Its incidence is higher in developing countries with a predominance of tubal and endometrial localization [5]. In our series, we identified 2 cases of cervical localization, 2 cases of endometrial localization and one case of tubal localization. The predisposing factors to tuberculosis are all factors that can reduce immunity such as poverty, air pollution, malnutrition, diabetes, tobacco, alcohol and drug abuse, HIV co-infection [6]. Physiopathologically, genital tuberculosis is generally secondary to pulmonary or extra-pulmonary tuberculosis (gastrointestinal, renal, bone, meningeal, etc.). There may be primary genital tuberculosis, the site of which will be the cervix, vagina or vulva, but this is rare, obtained by an active genitourinary infection of the partner (example: epididymal tuberculosis) [7]. The preferred age is in 80% of cases between 20 - 40 years [8]. It is rare in postmenopause because the atrophic mucosa in elderly women is not a favorable environment for the development of *Mycobacterium Tuberculosis* [9]. In our study, the average age was 28.8 years with extremes of 14 and 48 years. In a series of 13 cases in India, the mean age was higher than ours at 39.92 years and extremes of 18 to 74 years. [5]. In the USA, Hassoun et al published 2 cases of genital tuberculosis in a 26 and 65 year old woman [10]. In the majority of cases, it is an indolent pathology, most often manifested by infertility or secondary amenorrhea, more rarely by abdominal pain, or metrorrhagia or dyspareunia [11]. In our study, the clinical manifestations differ depending on the location. For cervical localization, it was post-coital bleeding and a suspicious appearance on VIA; uterine localization was manifested by uterine synechia with secondary amenorrhea and utero-parietal fistula and that of the fallopian tube by a tubo-ovarian mass.

Morphologically, the typical histologic appearance is that of granulomatous inflammation with giant Langhans cells and caseous necrosis. In the form without caseous necrosis, the morphological appearance may suggest fungal infection, syphilis or sarcoidosis [12]. Ziehl Nielsen stain is necessary for the detection of Acid-Alcohol-Resistant Bacillus (AFB), to allow confirmation of the diagnosis. According to a study by Mondal et al on 110 cases [13], the lesions observed were at different stages of their development and only rare cases could benefit from demonstration of AFB. Caseification and the presence of AFB can be observed in the tubal wall, it is rare in the cortex of the ovary, but what is most often observed are epithelioid granulomas [14]. These granulomas with or without caseous necrosis can also be observed in the cervical chorion, more rarely seen in the vagina or vulva. In our study, the morphological appearance was typical in tubal localization and utero-parietal fistula. For cervical localization, there were only epithelioid granulomas with giant Langhans cells (figure 1), but since

Madagascar is a tuberculosis endemic country, we raised the possibility of tuberculous lesion. In addition to tuberculosis, we also observed an associated high-grade intraepithelial neoplasia. For endometrial localization, epithelioid granulomas with Langhans cells were observed (Figure 2), the appearance was suspect and a study on Gen expert was performed, which allowed the diagnosis of tuberculosis to be retained.

Treatment of genital tuberculosis is similar to pulmonary tuberculosis according to the WHO recommendation in 2010 [15]. Under treatment, the outcome can be favorable, especially when treatment is started early. The outcome under treatment is most often favorable, but the risk of infertility is still high [4].

CONCLUSION

Genital tuberculosis is rare. Its diagnosis is histological. Further tests may be necessary for diagnostic confirmation. Early treatment allows for a better prognosis.

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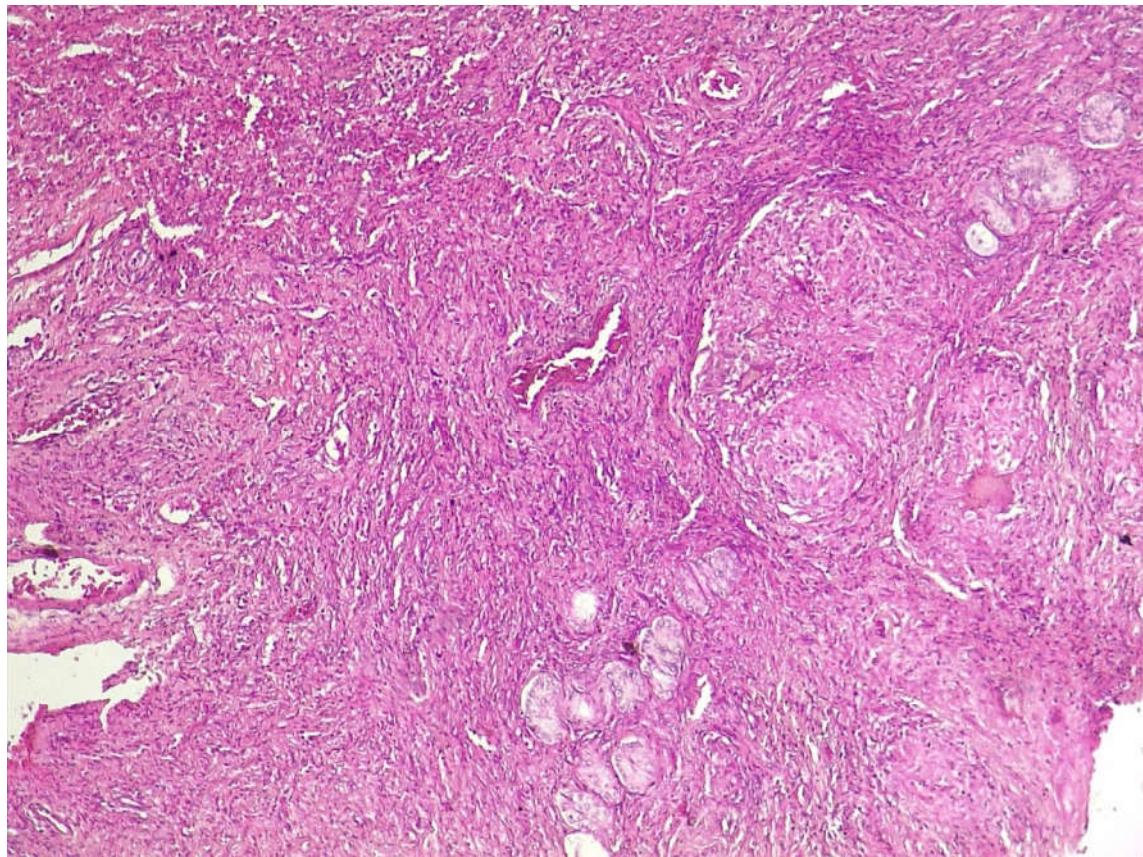


Figure 1: cervix biopsy

Coloration: Hematoxylin Eosin

Legend: 01: endocervical gland; 02: giant cell; 03: epithelioid granuloma

Magnification: x200

Source: Department of Pathology, Joseph Ravoahangy Andrianavalona University Hospital, Antananarivo, Madagascar.

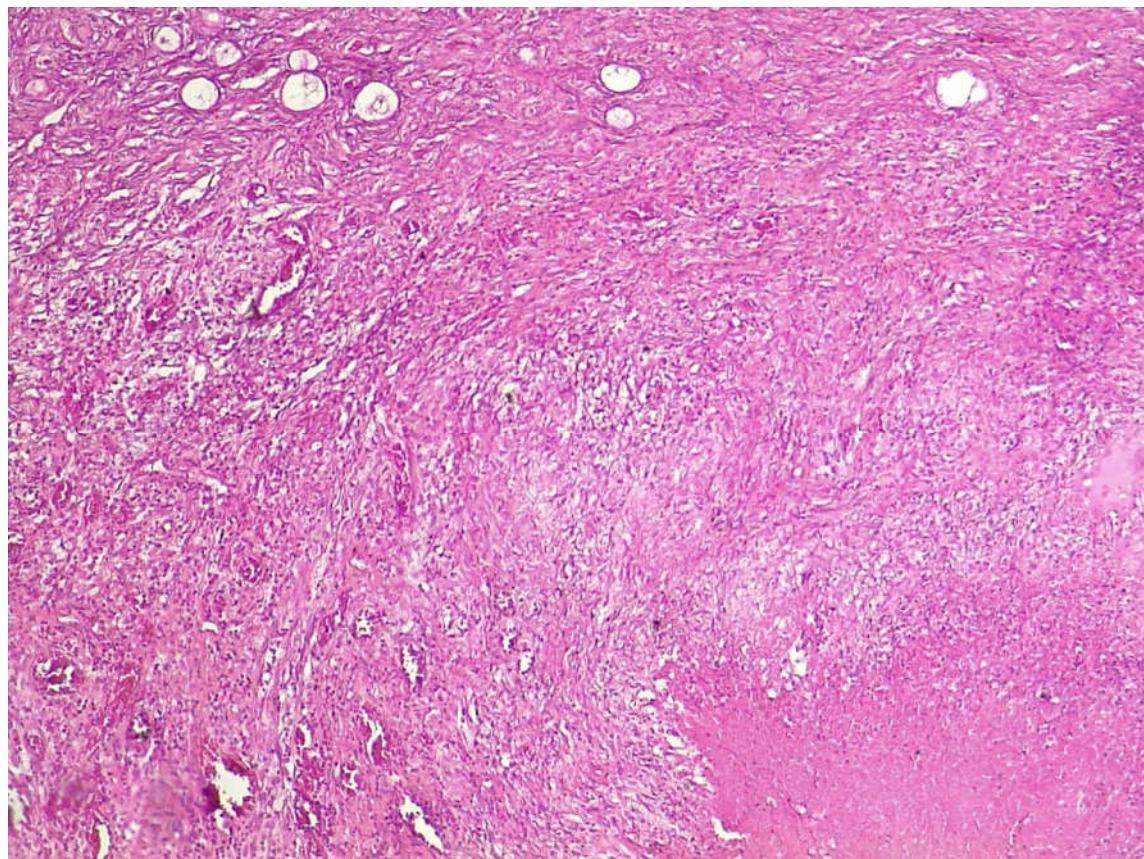


Figure 2: endometrium biopsy

Coloration: Hematoxylin Eosin

Legend: 01: atrophic endometrial gland; 02: caseous necrosis; 03: epithelioid granuloma

Magnification: x200

Source: Department of Pathology, Joseph Ravoahangy Andrianavalona University Hospital, Antananarivo, Madagascar.