

Impact of Genital Tuberculosis on Female Fertility: 2 Cases Report And Review of the Literature

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Abstract: Female genital tuberculosis is one of the extra pulmonary forms of tuberculosis. It is an uncommon pathology in developed countries, but it remains endemic in disadvantaged regions. The causative agent is, in the majority of cases, *Mycobacterium tuberculosis* and less often *Mycobacterium bovis*. Female genital tuberculosis is the cause of infertility through tubal but also uterine lesions that it causes. Diagnostic of certainty is provided by biology or histology. The management of infertility is essentially based on in vitro fertilization after a well-conducted medical treatment and a proven cure. Thanks to medically assisted procreation, the fertility prognosis remains good apart from damage to the endometrium which greatly reduces the chances of procreation.

In our work, we are reporting the case of 2 patients: the first one had an intestinal tuberculosis who subsequently presented tubal infertility with failure of 2 in vitro fecundation; She was aged of 32-year-old and consulted for 1 year amenorrhea with primary infertility of 16 months whose diagnosis of cervical tuberculosis was made after etiological assessment

Our goal was to clarify the clinical and iconographic aspects of female genital tuberculosis complicated by infertility and to study the therapeutic possibilities and the results

Keywords: Genital tuberculosis; Infertility; HSG, AMP

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I. Introduction:

Tuberculosis is still common in our climates and its incidence is on the rise worldwide.

Genital tuberculosis is ranked as the fifth location of tuberculosis after the pulmonary, ganglionic, osteoarticular and digestive tuberculosis.

Although the lesion prognosis is favorable, the prognosis for fertility remains the dominant problem.

Patient I:

38-year-old patient with genital tuberculosis 16 years ago declared cured, then 13-year-old infertility of tubal origin.

The patient underwent hysterosalpingography which objectified bilateral tubal obstruction. (Figure 1)

Subsequently, she underwent a left laparoscopic salpingectomy with fimbrioplasty on the right side; negative methylene blue test on the right side, followed by 2 failed in vitro fecundation. She consulted for the persistence of infertility, Clinical examination and hormonal balance were normal, pelvic ultrasound found a right hydrosalpinx (Figure 2), Hysteroscopy diagnosis: no particularity. Laparoscopy: multiple adhesions that have been released; Significant right hydrosalpinx with altered right tube (Figure 3) absent left tubes, both ovaries: no particulars, negative methylene blue test,

Performing a right salpingectomy; followed by in vitro fecundation failed again.

Patient II:

A 32 year old patient who consulted for 1 year amenorrhea with 16 months of primary infertility; clinical examination: speculum: ulcerated and budding cervix with thick and very abundant greenish leucorrhœa's. The rest of the clinical examination and pelvic ultrasound were without particularity,

Cervical biopsy found cervical tuberculosis

The patient received the protocol for anti-bacillary treatment with persistent infertility.

II. Discussion:

The incidence of genital tuberculosis in the causes of infertility varies from country to country. It ranges from 1% in North America to 19% in India. In Morocco, 10% of infertility is due to genital tuberculosis (1). Utero-adnexal involvement is a secondary manifestation of tuberculosis. The primary focus is most often pleuropulmonary, intestinal or renal (2, 4). TB infection spreads hematogenously to the tubal mucosa from

which it invades the rest of the tubal wall to the serosa. The infection can remain confined to the fallopian tube or spread by contiguity to the pavilion and the pelvic peritoneum, quite often the uterine cavity (50%) and very exceptionally beyond towards the cervix, the vagina and the vulva (6.5).

Genital tuberculosis causes infertility by several mechanisms: Indirect hyperprolactinemia by raising the dopaminergic tone secondary to infiltration of the dopaminergic pathways, uterine synechiae: this mechanical factor

Seems obvious when there is a complete stenosis of the isthmus or the uterine cavity preventing the migration of spermatozoa and the implantation of the egg, Infertility could be the consequence of a disorder of the receptivity of the endometrium, secondary to a vascular deterioration affecting its development and, consequently, the implantation of the egg, finally, anovulation, which is secondary to peritoneal adhesions, can also be the cause of infertility. (3, 8, 7)

The tubal images found : segmental rigidity, mass-tubular mass-filling or in a golf cane or in a rosary, clover, maltese cross or rosette image. There are two types of uterine images: - thermowell images corresponding to total body synechia or isthmic obturation; - pseudo-malformation images simulating all types of uterine malformations. (11,12)

Anti-tuberculosis treatment is effective, curing the condition. On the other hand, the gynecological sequelae are serious, most often altering the fertility potential of patients (9, 7). Indeed, the occurrence of spontaneous intrauterine pregnancy is exceptional in the literature and the risk of ectopic pregnancy significant. Medically assisted procreation therefore remains the only way to obtain a pregnancy (10)

In front of such a serious gynecological sequelae, often increased in our countries where we observe delays in diagnosis and an under-evaluation of lesions, we believe it is essential to strengthen prevention through systematic vaccination and to systematically seek localization genital in case of pulmonary tuberculosis screened or during investigations for sterility (3)

III. Conclusion:

Female genital tuberculosis is the cause of infertility through tubal, but also uterine lesions that it causes. Diagnostic of certainty is provided by biology or histology. The management of infertility is essentially based on in vitro fertilization after a well-conducted medical treatment and a proven cure. Thanks to medically assisted procreation, the fertility prognosis remains good apart from damage to the endometrium which greatly reduces the chances of procreation.

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