

Thimble Bladder

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Abstract

Case Report

Tuberculosis is a major public health issue in Morocco. Moreover, since the upsurge of HIV, it has become a global health issue. The urogenital localization is rarely primitive and ranks fifth in Morocco after lung, lymph node, bone and digestive system localization. It is a severe pathology because the diagnosis is often late and the lesions often bilateral, threatening the patient with definitive renal failure and / or infertility. Imaging is essential for positive diagnosis, assessment and evaluation of the impact on the urinary system. Diagnostic confirmation is bacteriological or histological. The treatment combines anti-bacillary chemotherapy with sometimes reconstructive surgery of the kidneys and urinary tract.

Keywords: Thimble bladder, Tuberculosis, Augmentation cystoplasty.

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INTRODUCTION

Urogenital tuberculosis corresponds to the damage of the urinary and genital tract by the Koch's bacillus. It can be disseminated, or localized only in the urogenital tract. It mainly affects the young adult male. There is an upsurge of this pathology due to HIV co-infection [1]. The diagnosis is often difficult and the prognosis remains reserved, especially when discovered lately [2, 3]. The aim of this work is to describe one of the most evocative presentations of tuberculosis, but which remains extremely rare.

OBSERVATION

Mrs. B.H is 42 years old married woman, and the mother of 4 children, hospitalized in our department for hematuria. In her medical history, a pulmonary tuberculosis was discovered 5 years ago, and treated during 9 months. She was declared cured. The begun 15 years ago, with low urinary tract symptoms, as dysuria, urgenturia, pollakiuria, nycturia, and total hematuria. The clinical examination found a patient in a good general condition, with no anemia signs. The rest of the physical examination was without any particularities.

The biological assessment didn't show neither anemia nor renal failure. The chest x-ray was normal. The patient received a KUB x-ray, that showed calcic images in the right renal area, and intravenous urography (IVU), which showed a daisy-like appearance of the middle calyceal group of the left kidney, a mastic right kidney, and a moderate uretero-hydronephrosis upstream staged ureteral stenosis, and finally a small "thimble" bladder (Figure 1). Kidney ultrasonography and computed tomography were not performed.

Supra-trigonal cystectomy and augmentation cystoplasty was performed. The histological study of the specimen showed epithelial gigan-to-cellular lesions with caseous necrosis, which is pathognomonic of tuberculosis. A post-operative IVU was performed to objective the absence of extravasation of the contrast medium out of cystoplasty (Figure 2).

The patient was examined each year. The patient reports an improvement in the quality of life. A cystoscopy performed at 10-year follow-up shows the success of the procedure, particularly regarding bladder capacity.



Figure 1: IVU before the surgery



Figure 2: IVU after surgery

DISCUSSION

Since 1985, there has been a resurgence of tuberculosis worldwide. The DOTS (Directly Observed Treatment Short-course) strategy, recommended by the WHO, was adopted in our country in 1991. Thus, the rate of detection and therapeutic success improved significantly [1]. Nevertheless, tuberculosis remains a

public health problem in Morocco. In addition, 10% of tuberculosis cases worldwide in 1999 occurred in HIV-affected patients. In some endemic areas, the percentage can reach 60%. Of the 3 million AIDS deaths in 1999, 30% were due to tuberculosis. SCUFFER found a rate of 37% of HIV positive patients with urogenital tuberculosis [4].

The delay in diagnosis can be explained by the polymorphism of the disease, the low specificity of clinical manifestations and the scarcity of signs of tuberculosis impregnation [5]. In our case, the diagnostic delay is almost 15 years. The lesions were advanced, with destruction of the kidney and bladder, with deterioration of the quality of life due to disabling high urinary frequency. These advanced forms are still found in our region, unlike other series of Western literature [6].

In most series, a detection rate of BK on direct examination or urine culture is found ranging from 29 to 87.5% [7]. In our case, the cytobacteriological examination of the urine was sterile. New molecular biology techniques, including the polymerase chain reaction (PCR), enable early diagnosis with a sensitivity of 80% and a specificity of 97% [8].

One of the key paraclinical assessments remains imaging [9]. In our economic context, IVU is an affordable and easy test. It has contributed significantly to the positive diagnosis, and allows to count and map lesions. It is also essential for therapeutic indications. Thus, among the evocative images, we find renal calcifications, caves, stenosis of the calyceal neck, pelvis retraction, staged ureteral strictures and small “thimble” bladders. Other imaging techniques (ultrasound, computed tomography) have a significantly lower performance than intravenous urography.

In addition, it must be remembered that infertility is a frequent consequence of genital involvement. This is all the more disastrous as the affected population is young. It is often an excretory and rarely secretory sterility [10]. Regarding the therapeutic strategy, it focuses on two axes: antibiologic medical treatment [11] and surgery. Indeed, despite its remarkable efficiency, and free in Morocco, the place of surgery in the therapeutic arsenal remains undeniable [12]. It is complementary to medical treatment and consists of two components: the resection and reparation. In our case, we performed supra-trigonal cystectomy, with an augmentation cystoplasty using intestinal segment.

CONCLUSION

Urogenital tuberculosis is a serious and always present condition. His diagnosis is late because it is often difficult. It is based on bacteriological, radiological and histological elements. IVU has a predominant place in our economic context. Surgery of excision and / or reconstruction and / or endourology is often necessary to remove the obstacle, but also to improve the quality of life of the patients affected.

Nevertheless, the best treatment remains preventive and relies on BCG vaccination, improvement of hygiene conditions and the fight against precariousness.

CONFLICTS OF INTEREST

The authors do not declare any conflict of interest.

Contribution of the Authors

The authors participated equally. All authors have read and approved the final version of the manuscript.

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