GENITOURINARY AND OSTEOARTICULAR TUBERCULOSIS (POTT’S DISEASE)

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Summary.- OBJECTIVE: We present the case of a patient with urogenital and osteoarticular tuberculosis.
INTRODUCTION

The tubercular disease is a disorder that has increased its incidence in western societies significantly, due to several causes such as the AIDS pandemic. Tuberculosis in any location is the most common disease in patients with AIDS, immigrants and immuno-compromised patients or patients with immunodeficiency. Urinary tuberculosis is a disease that affects young adults (60% of the affected patients are between 20 and 40 years old), and it is slightly more common in men than in women (1).

Urinary tuberculosis is always a secondary focus, and it must be seen as such whenever it is located in the kidneys, ureter, bladder and urethra. Kidneys are the most commonly affected organs, and they are the first to show clinical symptoms. Testicular and prostatic infections are less common.

In all cases, the main infection route is the hematogenous pathway.
(See Fig. 2), with ossifluent abscess towards the thigh. After an assessment in the service of traumatology, a symptomatic treatment with an orthopaedic corset was decided.

The result of the prostatic biopsy was prostate adenocarcinoma (Gleason 3+2) that affected the right lobe.

Löwenstein in urine: Positive for Mycobacterium tuberculosis.

The patient is diagnosed with urogenital tuberculosis and vertebral involvement L2-L3 (Pott disease), and he remains with tuberculostatic treatment (Isoniazid mg/Kg/day + Pyrazinamide 30 mg/Kg/day + Rifampicin 10 mg/Kg/day for 2 months; Isoniazid + Rifampicin in the same dose for the following 4 months).

**DISCUSSION**

Although the lung is the main target organ of tuberculosis, any other organ and system can be affected too. The finding of M. tuberculosis is uncommon. Therefore, the symptoms, the analysis results and specially the biopsies with a histological and bacteriological study lead us to the certainty of diagnosis.

Extrapulmonary tuberculosis represents 10% of all the tuberculosis cases that affect immunocompetent patients, although this rate increases significantly in people with some degree of immunodeficiency (2).

The main key for the diagnosis of urogenital tuberculosis is given by a proper exam of the urine (sterile pyuria, acid pH and culture for tubercular bacillum). Recently, tests for the detection of urinary tuberculosis through PCR, which have proven to be faster and more precise, have been introduced in the market (3,4).

There are three locations that can be considered serious: meningoencephalic, osteoarticular and renal locations. The adjuvant treatment with corticoids in order to prevent obstructive uropathies in case of ureteral involvement is subject to controversy in the urological literature, with little scientific evidence (5).

The most commonly affected bones and joints are the vertebral column, the hips, and the knees, while all the other locations are not usually compromised. Sir Percival Pott, in 1779, was the first to establish a relation between the twisted spine and tuberculosis, and that is why this disorder has his name, Pott disease. The location in the column appears in 1% of all cases, and dorsal and lumbar vertebrae are the most common locations. In our case, the symptom of lumbar pain was crucial for the diagnostic suspicion of tuberculosis (Figure 2).

Tuberculosis of the urinary system must include the cases in which the location is the kidney, the ureter, the bladder and the urethra. The kidney is the most commonly affected organ, and it is the first that shows clinical manifestations. The main infection route is the hematogenic pathway, whereas an infection via the lymphatic pathway is extremely rare.

At first, the lesion is circumscribed to the cortical region of the kidney. Through the kidney tubules or the lymphatic tubules it reaches the spinal cord and it produces a tubercular ulcerous papillitis. This region is more vulnerable to the lesion, and it is the one in which the first clinical manifestations. The lesion could also reach a cavity in which it enters into contact with the excretory pathway.

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**FIGURE 1.** Posteroanterior thoracic X-Ray: A bilateral interstitial pattern with fissure hemorrhage can be seen.

**FIGURE 2.** Abdominal NMR: Bilateral renal cortical atrophy and Pott disease.
The excretory pathway then suffers a congestive process and an edema or ulcers that form a scar that can cause an obstruction, thus hampering the evacuation of the excretory pathway and causing an increase in the endocavitary pressure. If this situation is not fixed, it can become into a pseudocystic cavity or a cavern. the bladder can be fibrous and can withdraw, while the trigone of the urinary bladder is the only part that remains unaffected.

Tuberculosis of the bladder is usually cured when a definitive treatment for the primary genitourinary infection is established. If the vesicle ulcers do not respond to the treatment, trans-ureteral electrical coagulation might be required (1).

CONCLUSION

Given the persistence of repeated urinary infections with poor response to the usual diagnosis, we must take into account urogenital tuberculosis into the differential diagnosis.

An early urographic study can be crucial in the diagnosis of urogenital tuberculosis in initial stages, thus avoiding the progressive deterioration of kidney function, as well as the progression towards a terminal renal failure.

REFERENCES AND RECOMMENDED READINGS
(*of special interest, **of outstanding interest)