Genitourinary tuberculosis: presentation of three atypical cases

Rosas-Nava JE,1 Franco-Morales A,1 Almanza-González MS,2 Jaspersen-Gastelum J,2 Garduño-Arteaga L,2 Soria-Fernández G.2

ABSTRACT

Tuberculosis is a pandemic, transmissible, preventable and curable disease that is experiencing a resurgence secondary to human immunodeficiency virus (HIV/AIDS) and therefore needs to be detected and treated adequately.

Objective: To report three cases of atypical genitourinary tuberculosis.

Results: Three cases of genitourinary tuberculosis are reported: one case of epididymal tuberculosis that clinically presented as treatment-refractory scrotal fistula and two cases in which just hematuria was manifested. In all three cases laboratory work-up was negative and only polymerase chain reaction (PCR) was positive for tuberculosis.

Key words: genitourinary tuberculosis, M. tuberculosis, Mexico.

RESUMEN

La tuberculosis es una enfermedad pandémica, transmisible, prevenible y curable, que en el momento actual ha mostrado signos de resurgimiento como efecto de la enfermedad del HIV-SIDA; en consecuencia, es importante detectarla y tratarla de manera adecuada.

Objetivo: Comunicar tres casos de tuberculosis genitourinaria con presentación atípica.

Resultados: Se reportaron tres casos de tuberculosis genitourinaria; uno de ellos corresponde a la tuberculosis epididimaria, la cual se presenta clínicamente en la forma de fístula escrotal que no responde al tratamiento; los otros dos casos se manifiestan tan sólo con hematuria, con estudios negativos y sólo positividad para M. tuberculosis en la reacción en cadena de la polimerasa (PCR).

Palabras clave: tuberculosis genitourinaria, M. tuberculosis, México.
INTRODUCTION

Tuberculosis (Tb) is a pandemic, transmissible, preventable and curable disease. Its prevalence continues to be high with more than 1,700 million cases worldwide, 95% of which are diagnosed in persons living in developing countries. In the West only 8-10% of patients with pulmonary Tb develop renal Tb. In under-developed countries up to 15-20% of individuals present with M. tuberculosis in urine and 4-8% develop manifestations of the disease. Tb incidence in developed countries has diminished but on a worldwide level prevalence is almost the same as it was at the beginning of the twentieth century. This increase is related to human immunodeficiency virus (HIV/AIDS) infection, to the increase in human migration, Bacillus Calmette-Guérin (BCG) therapy for bladder cancer and kidney transplant. AIDS patients are at high risk for developing infections such as tuberculosis. The incidence of Tb in these patients is 500 times higher than in the general population and there is higher risk for extrapulmonary Tb. It has been reported in certain series that 20-73% of all cases of extrapulmonary Tb present as orchiepididymitis. One individual with active Tb can infect 10-15 others per year. Due to the atypical aspect of these cases today and given the importance of prominent Tb resurgence in the authors’ environment, they are reporting diagnoses, management and progression of three cases at the Hospital General de México.

CASE 1

The patient is a 46-year-old man whose maternal aunt died from pulmonary Tb and whose mother died from kidney cancer. He has adequate dietary habits and personal hygiene. Patient was an alcoholic from 13-39 years of age and used marijuana and cocaine on one occasion. First sexual intercourse was at the age of 13. The patient is heterosexual and has unprotected sexual contact with prostitutes. Patient never uses a condom and presented with condyloma acuminata in the genital area that were fulgurated 22 years earlier with no recurrence; positive Coomb's test.

Patient's present illness began 4 years earlier with very intense, stabbing, non-radiating bilateral pain in the dorsal lumbar area accompanied with nausea and chills. There was no lower irritative urinary symptomatology. Symptoms increased with physical activity and became sporadic with the intake of analgesics. These symptoms presented on 3 different occasions. Seven months ago patient presented with increase in volume of left hemiscrotum with increase in temperature and local hyperemia with pain upon walking accompanied by fever. There was no lower irritative urinary symptomatology or urethral secretion. Patient was prescribed unspecified medication with no significant clinical improvement. Five months ago patient presented with very intense colicky pain in the left lumbar area that radiated to the left flank together with nausea, chills, unquantified fever, dysuria, frequent urination and total hematuria with filiform clots. He did not present with factors that would worsen his condition and symptoms diminished with antispasmodic medication. Patient sought medical attention at the urology out-patient service of the Hospital General de México. He presented with spontaneous drainage of purulent, non-fetid matter at the scrotal level. Upon physical examination costovertbral angle percussion was negative as well as ureteral points. Penis and right testicle were unaltered and 5 x 5 cm left testicle had an increase in volume. It was not painful and had no temperature or coloration changes. Left epididymis was hardened and slightly painful with discrete purulent exudates from a 1 x 1 cm fistula in the left hemiscrotum. Inguinal cords were unaltered and the rest of the examination was normal.

Laboratory work-up including complete blood count, full blood chemistry, serum electrolytes and thrombin clotting time was normal. Urinalysis showed leukocytes 100 per field, erythrocytes 1 per field. Urine culture was negative and tumor markers were normal. BAAR in urine was positive and Lowenstein-Jensen culture was positive for M. tuberculosis. PSA: 1.03 ng/ml, urine polymerase chain reaction was positive for M. tuberculosis. ELISA-HIV was negative. Scrotal ultrasonogram showed heterogeneous image in epididymis (Images 1 and 2).

Excretory urography and chest X-ray showed no alterations. Computerized tomography (CT) scan revealed heterogeneous image in left scrotal sac of 20-25 HU and another of 10.5 HU and 2.42 x 1.53 cm compatible with perivesical lymph node (Image 3).

CASE 2

The patient is a 41-year-old male with a family history of type 2 diabetes mellitus. Patient suffered intense alcoholism from 18-38 years of age. Patient has smoked a pack of cigarettes daily since the age of 17 years to the present. Disease onset began 6 years earlier with pain in the left back flank together with macroscopic hematuria with filiform clots and storage symptomatology lasting for 5 days. Symptoms were relieved with unspecified analgesics. These symptoms presented twice a year over a five-year period. One year ago patient presented with persistent hematuria, no pain, persistent storage symptomatology together with filiform clots. A transurethral catheter was placed two months ago.
Costovertebral angle percussion was negative upon physical examination and there were no ureteral points. External genitals were normal for age and sex with no alterations. Transurethral catheter drained hematuric urine with no apparent clots. Testicles showed no alterations.

Laboratory work-up produced normal complete blood count, full blood chemistry and thrombin clotting time. Urinalysis reported leukocytes 2-3 per field, erythrocytes 50-60 per field; BAAR in urine: 5 negative samples, Lowenstein-Jensen culture: negative at 60 days. Excretory urography showed no alterations.

Cystoscopy showed no vegetative or exophytic lesions or other alterations at the bladder level. Hematuria was present through the left ureteral meatus. Left retrograde pyelography was done and left selective cytology was taken. No malignant cells were reported. Abdominal CT showed no tumors at the left kidney level or any other alteration. Renal arteriography showed no evidence of arteriovenous (AV) fistula or any other alteration. PCR for Tb in urine was positive for M. tuberculosis.

**CASE 3**

Patient is a 68-year-old woman with a history of high blood pressure of 12-year progression. Illness began 8 years ago with hematuria, with no urinary symptoms or pain. Physical examination revealed no alterations. Complete blood count and full blood chemistry were normal. Urinalysis reported 3-4 leukocytes per field and 20-25 erythrocytes per field. Kidney ultrasonogram, excretory urography and cystoscopy were normal. BAAR in urine was negative for 5 samples. Lowenstein-Jensen culture was negative after 5 weeks. Patient continued with hematuria and repeat cystoscopy was normal. Urine culture was negative and PCR for Tb in urine was positive for M. tuberculosis.

**CONCLUSIONS**

Today tuberculosis is resurging secondary to HIV-AIDS disease and so it is important to detect the disease and treat it adequately. The cases presented here are rare cases of genitourinary tuberculosis that were relatively easily diagnosed. The first case presented with the classic scrotal fistula that did not heal despite antimicrobial treatment. Consequent studies detected M. tuberculosis and patient was treated with antituberculosis drugs for 9 months, the first three months with isoniazid, rifampin and ethambutol daily and the following 6 months with isoniazid and rifampin 3 times per week after
which there was improvement and scrotal fistula closed. The second case was diagnosed by rule-out diagnosis since only PCR was positive. A 9-month antituberculosis drug regimen was carried out, eliminating hematuria, and control urinalysis showed no erythrocyturia.

BIBLIOGRAFÍA