CASE REPORT

Pseudotumoral Renal Tuberculosis: A Case Report and Review of Literature

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Abstract

Genitourinary Tuberculosis (TB) is a rare extra pulmonary manifestation of TB. We report a patient who presented with right flank pain and weight loss. Imaging revealed a solid mass at the lower pole of the right kidney. A partial nephrectomy was performed and histopathology confirmed the diagnosis of pseudo-tumoral renal tuberculosis. Patient had a good outcome after antituberculous therapy. This form of TB must be considered in the differential diagnosis of renal mass particularly in areas where TB is endemic.

Key-words: Pseudotumoral Renal Tuberculosis, Kidney, Tuberculosis.

Introduction

Tuberculosis (TB) involves several extrapulmonary sites commonly including lymph nodes, pleura, and osteoarticular areas, although any organ can be involved. The diagnosis of extrapulmonary tuberculosis can be elusive, necessitating a high index of suspicion. Physicians must obtain a thorough history including patient’s endemic origin and their risk factors for acquiring human immunodeficiency virus (HIV).

Figure 1: Renal ultrasonography: lower pole kidney tumor with multiple calcifications (asterix)
Patient’s physical examination only revealed right flank tenderness but no mass on palpation. Abdominal ultrasonography showed a heterogenic and hypoechoic mass at the lower pole of the right kidney, measuring 6 x 8 cm with fine calcifications (Figure 1). Intravenous pyelography confirmed the findings seen on ultrasonography with a lower pole tumoral syndrome (deformities and compression of low caliceal cavities) (Figure 2). Abdominal computed tomography was consistent with a cystic renal mass with enhancing multiple thin and regular septa (Figure 3) with no calcifications. The Chest X-ray was normal. Basic haematological work-up was unremarkable except for mild anemia. A partial right lower lobe nephrectomy was performed. Final pathology was consistent with renal tuberculosis. Patient received the antituberculous therapy for 8 months. He remains in good health after 120 months of follow-up.

Discussion
Tuberculosis is a common public health problem in endemic areas like Tunisia (1). It continues to be an important diagnostic problem because of its non-specific clinical presentation and variable radiographic appearances which often mimic many other pathologic lesions (1). In Tunisia, the genitourinary tract is reported as the second most common site of extrapulmonary tuberculosis (1). The radiological findings of urinary tuberculosis are widely variable and urinary tract tuberculosis has been designated as a great imitator of diseases. The excretory urogram may be normal in earlier stages. In the later stage, calcifications occur in approximately one-third of cases. The renal outline may be deformed with cavitations and strictures of calyces and pelvis. CT findings in renal tuberculosis include focal caliectasis, hydronephrosis, calcifications, cortical thinning and soft tissue masses (tuberculomas) (2).
In rare cases, urinary tuberculosis manifests as either single or multiple parenchymal nodules without urinary tract involvement (1-3). Patients with this form, known as the pseudotumoral type, present with variable sized but well-defined parenchymal nodules on cross-sectional images (1-3). Clinical and radiological findings mimic those of a renal cancer (1,4). The lesion may simulate a renal hydatid cyst or a pseudotumoral xanthogranulomatous pyelonephritis (1).
A surgical removal of the mass is typically required as diagnosis is often suspected intraoperatively and confirmed only on histopathology (1,5). Surgery must be followed by anti-tuberculous therapy for at least 8 months (1,5).
Complications involve ureteral stenosis, hydronephrosis and hypertension. Regular radiological follow-up is necessary.

Conclusion
pseudotumoral renal tuberculosis is extremely rare and may simulate renal cancer. Clinical and radiological findings are insufficient to make a diagnosis which is made either intraoperatively or on final pathology.

References