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A rare case of ureteral tuberculosis mimicking a tumor

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ABSTRACT

Isolated ureteral involvement in urogenital tuberculosis is rare. The diagnosis can be difficult to evoke. The radiological aspect often evokes tumor involvement, hence the importance of mentioning this pathology in endemic countries. The purpose of this study is to show that it will be necessary to think of ureteral tuberculosis in the presence of ureteral thickening living in an endemic country. We reported a case of ureteric tuberculosis in a 46-years old man mimicking a tumor.

1. Introduction

Tuberculosis is an endemic disease in Tunisia. Urogenital tuberculosis is characterized by a clinical polymorphism making diagnosis difficult.

Ureteral involvement is a very rare form. The radiological aspect often evokes tumor involvement, hence the importance of mentioning this pathology in endemic countries.

On top of that, the risk of destruction of the renal parenchyma leads to make the diagnosis quickly.

Therefore, we describe an isolated ureteric tuberculosis case, and we discuss the clinical, imaging, diagnostic and therapeutical features.

2. Case presentation

A 46-year-old patient consults for right low back pain without fever, hematuria or low urinary tract symptoms which has been evolving for 4 months. The physical examination was normal.

We did not find a palpable mass. Digital rectal examination was normal. Laboratory investigations were performed and showed a normal kidney function with a creatinine of 79.4μmol/L, an inflammatory syndrome with an erythrocyte sedimentation rate of 86 mm/hour and a C-reactive protein of 169,4 mg/L, even thought the remaining laboratory investigations were unremarkable.

Faced with this clinical presentation, a CT scan was performed highlighting a right ureteral lesion invading seminal vesicles and right hydronephrosis. the first arrow is in front the hydronephrosis and the second is in front of the invasion (Fig. 1). The diagnosis of ureteral tumor was evoked. Cystoscopy was normal, but ureteroscopy revealed the appearance of extrinsic compression without intraluminal lesion. There was ureteral stenosis that lead to and incomplete ureteroscopy. The decision was to perform a biopsy of the lesion.

The diagnosis was made by transrectal biopsy of the mass under CT control. Histological analysis revealed a large inflammatory granuloma composed of epithelioid cells and multinucleated giant cells with caseous necrosis at the center of the granuloma (Fig. 2).

The mycobacterial culture was negative but urine PCR was positive A double J stent was placed to drain the right kidney and the patient was started on anti-tuberculosis treatment. Patient is doing well under tuberculosis treatment and first CT scan scheduled in 3 months.

3. Discussion

Urogenital Tuberculosis (UGTB) derives from hematogenous spread of *Mycobacterium,* which frequently occurs secondary to tuberculosis in other sites, mostly the lungs.[1] In our case, we did not find any lung lesion that could suggest the diagnosis of tuberculosis. A radiological assessment of the entire urinary tract is always indicated as well as a chest X-ray in search of a pulmonary localization.[2]

Pseudotumoral ureter tuberculosis is unfrequent.[3] It is possibly caused by an extending fibro-inflammatory process in the thickening of the ureteral wall, this appearance may be mistaken for a ureteral tumor on CT. Ureteral lesion is frequently observed at the ureterovesical junction and can lead to ureteral strictures and cause hydronephrosis.

The clinical examination is important when diagnosing urogenital tuberculosis like epididymo-testicular lesion. even if in our case, we did

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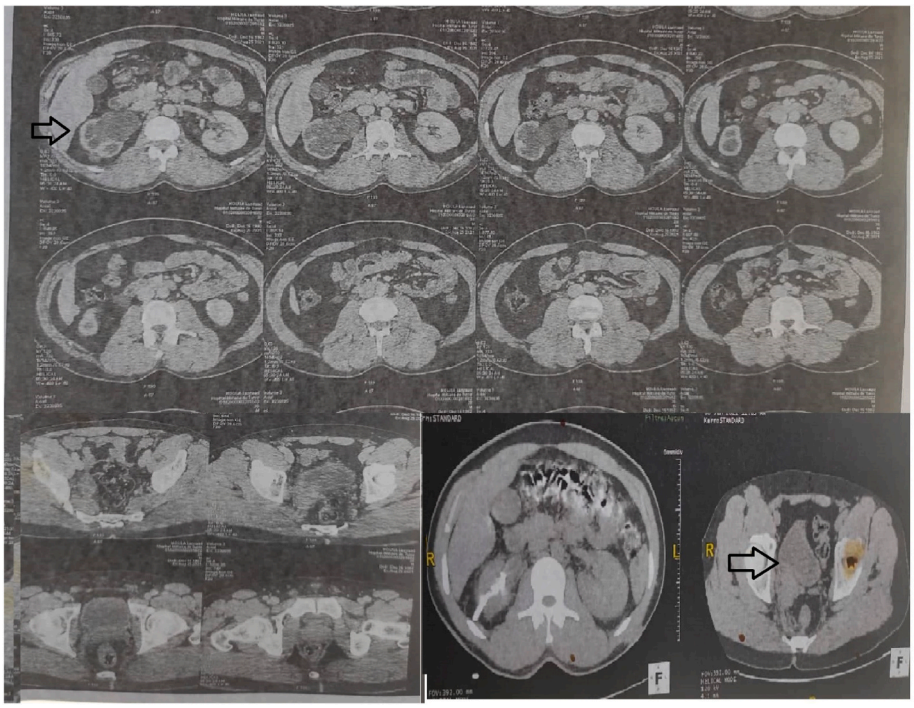

Fig. 1. CT scan highlighting a right ureteral lesion invading seminal vesicles and right hydronephrosis.

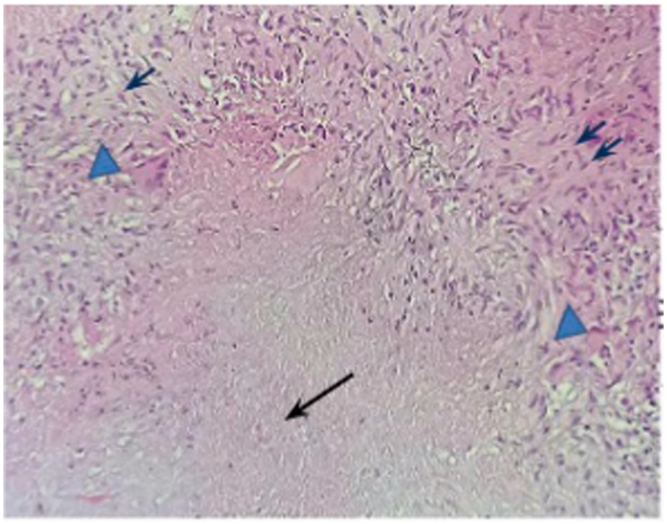

Fig. 2. Histological analysis showing a large inflammatory granuloma composed of epithelioid cells and multinucleated giant cells with caseous necrosis at the center of the granuloma.

not find any signs evoking this diagnosis. Urinalysis may show asymptomatic bacteriuria suggesting the diagnosis of urogenital tuberculosis. Mycobacterial culture is the gold standard test, while urine PCR is the ideal diagnostic test because it gives a result within 24–48 hours.

The biopsy of the lesion keeps its place as in our case and show epithelioid granuloma and caseous necrosis.[4]

The CT scan with micturition examinations can make an enlarged determination of the urogenital tuberculosis lesions.

The treatment include a antibacillary antibiotics and surgical urinary drainage in case of urinary tract obstruction.

Bladder and ureter reconstruction with ileum is an option in several cases of irreversible lesion of the urinary way.[5]

4. Conclusion

Urogenital tuberculosis is endemic in several countries but isolated ureter lesion is rare. It will be necessary to evoke the diagnosis of tuberculosis in a patient with ureteral thickening living in an endemic country.

Consent

Informed consent was obtained from the patient for presentation of the details of this case, along with the images for the purposes of publication. No personal identification information has been displayed in the images.

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Ethical approval

Ethical approval obtained.

Authors contribution

Aziz Kacem: Conception of the study.
Mehdi Raboudi: Drafting the article.
Faten Gargouri and Nada Mansouri: Interpretation (Histopathological examination).
Mohamed Dridi and Samir Ghozzi: Final approval.

Declaration of competing interest

The authors declare that they have no competing interests.

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