

# Renal Tuberculosis Presenting as a Tumour of the Upper Urinary Tract: A Very Rare Case

Benatta Mahmoud <sup>a\*</sup>

<sup>a</sup> Oran 1 Ahmed Ben Bella - CHU Oran, Algeria.

## Author's contribution

The sole author designed, analyzed, interpreted and prepared the manuscript.

## Article Information

### Editor(s):

(1) Dr. Hab. Mariusz Cycon, Medical University of Silesia, Poland.

### Reviewers:

(1) Anwar Ali Ajamali, Peoples University of Medical and Health Sciences for Women (PUMHSW), Pakistan.

(2) Swanand Rewatkar, Sri Balaji Vidyapeeth Deemed University, India.

Complete Peer review History: <https://www.sdiarticle4.com/review-history/72960>

Case Study

Received 25 June 2021  
Accepted 02 September 2021  
Published 19 November 2021

## ABSTRACT

Urinary tract tuberculosis is a relatively common form of extra-pulmonary tuberculosis, accounting for 3-5% of all cases of tuberculosis [1].

We report a very rare case of a 44-year-old man who presented with right flank pain and weight loss. CT SCAN showed a tumour of the right upper urinary tract. This smoking patient with no pathological history underwent surgery, nephro-ureterectomy with a bladder circular patch was performed in open surgery, but pathology described tuberculous lesions without tumour. An anti-tuberculosis therapy of nine months was started; the patient had a good result after two years.

This type of situation is exceptional, but this tuberculosis localization must be considered in the differential diagnosis of carcinoma of the upper urinary tract, especially in areas where tuberculosis is endemic. Endoscopic exploration with or without biopsy may be the tool to make the diagnosis and avoid radical surgery.

*Keywords: Extrapulmonary tuberculosis; urinary tuberculosis; upper urinary tract cancer.*

## 1. INTRODUCTION

Extrapulmonary tuberculosis is one of the great mimics of medicine and often masquerades as malignancy. As a result, patients may be referred

to surgeons for radical removal of organs or to oncologists for further evaluation and treatment, delaying the prescription of anti-tuberculosis drugs [2].

\*Corresponding author: E-mail: BENATTA.MAHMOUD@GMAIL.COM;

Urinary tract tuberculosis is a rare localization and difficult to diagnose, especially in the early stages, imaging shows aspects of destruction of the parenchyma and stenosis of the urinary tract in the secondary state of this pathology.

Even in endemic countries, the majority of cases of urinary tuberculosis are revealed by histology after surgery or biopsy.

## 2. CASE REPORT

A smoking 44-year-old man was admitted with complaints of right flank pain associated with repeated total but minimal hematuria and weight loss since 6 months. He had no history of fatigue,

loss of appetite, fever, chills, or respiratory symptoms. The patient denied any exposure to tuberculosis. He was otherwise in good health and had no history of diabetes, hypertension, or other medical problems.

The patients physical examination revealed tenderness of the right flank only, but no mass on palpation. An abdominal CT scan showed a normal functional left kidney with a normal left ureter, but the right kidney was hydronephrotic with irregular parenchyma and the ureter was stenotic at multiple sites (Fig. 1). The bladder had normal capacity and complete drainage after urination.

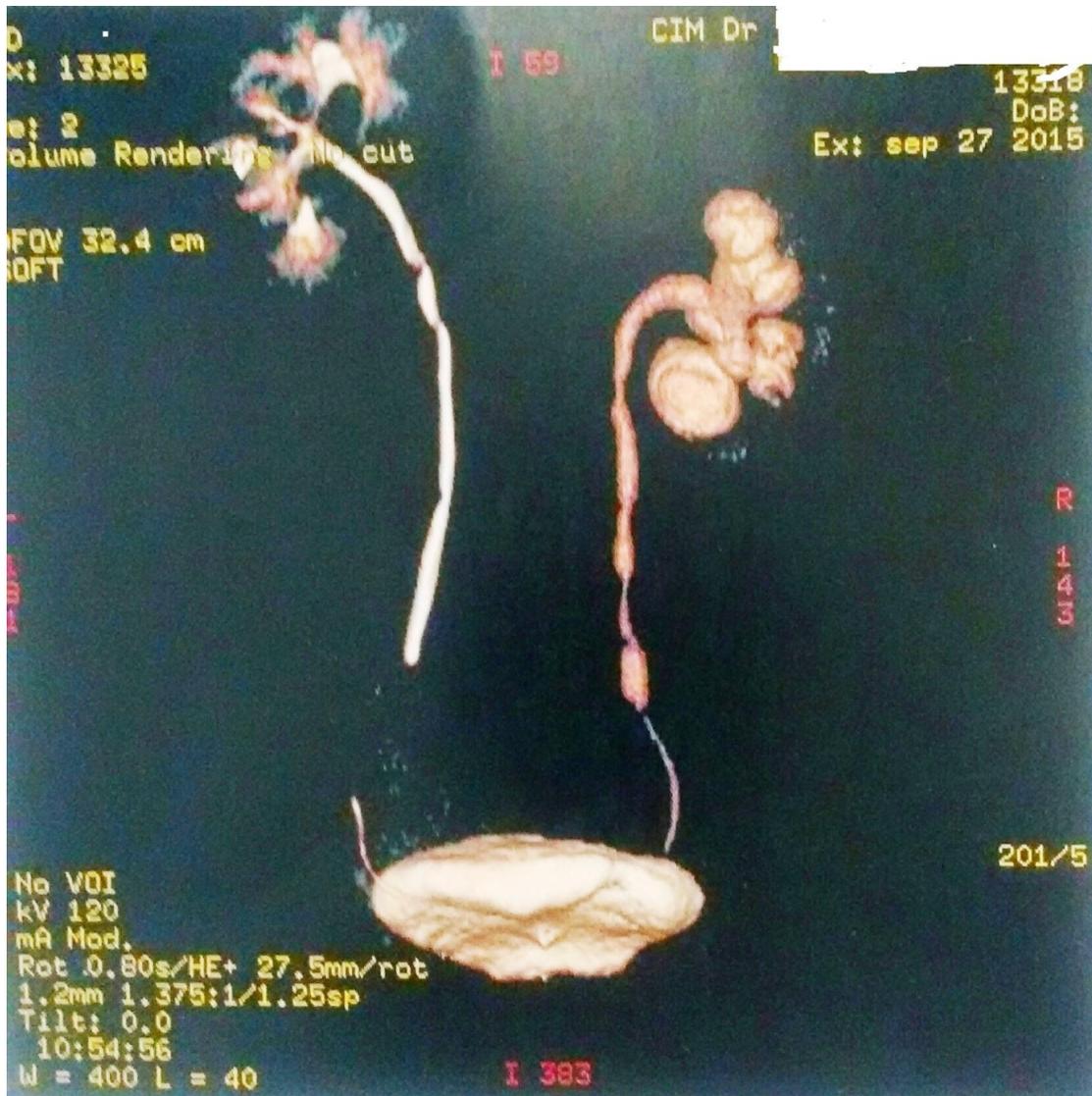
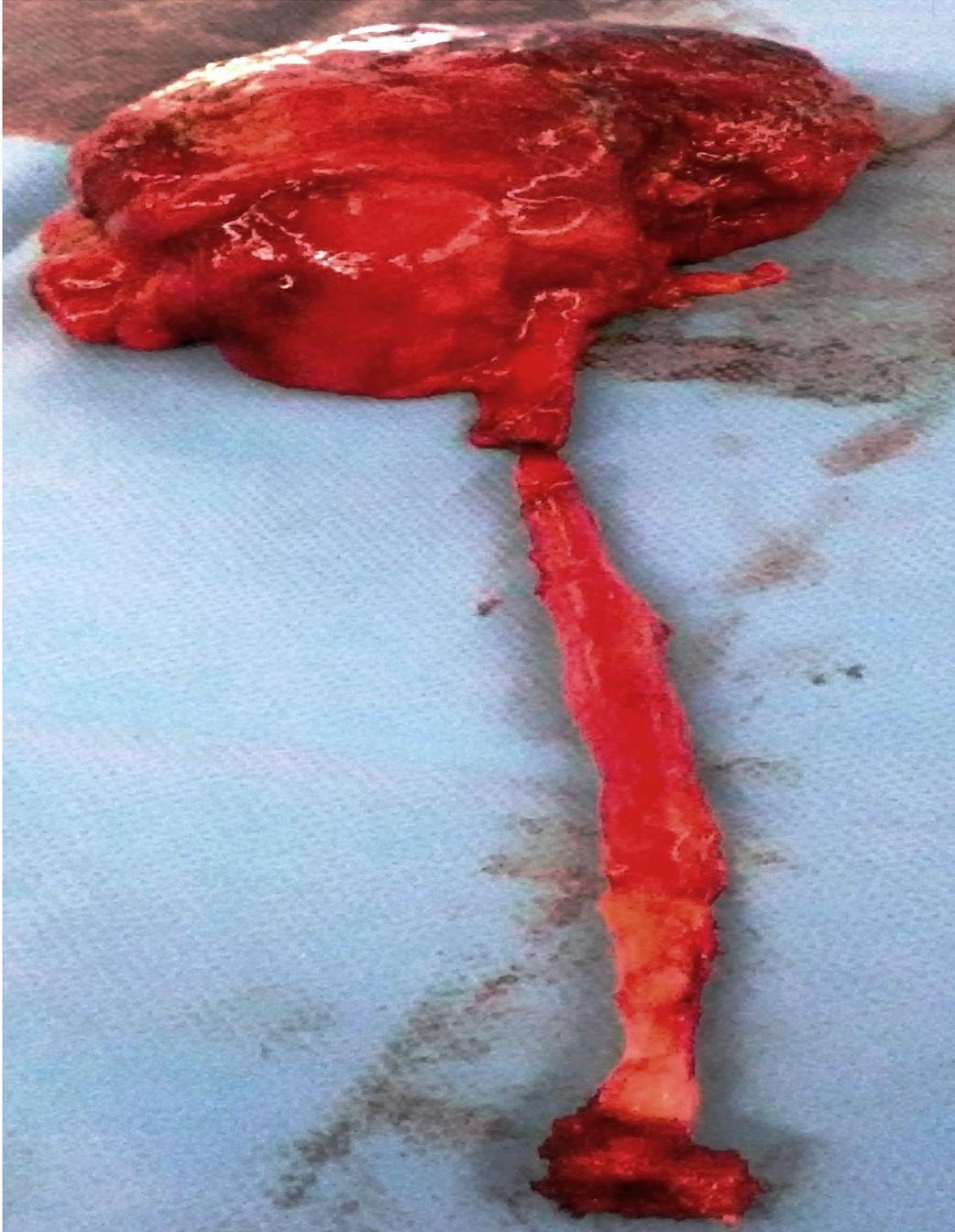


Fig. 1. Urotdm showing hydronephrotic right kidney with multi stenotic uretere

Baseline haematological analysis was unremarkable except for mild anaemia. Based on the primary diagnosis of upper urinary tract based on the images of multi-stenotic ureter with clinical and socioeconomic context of tuberculosis contamination a nephro-ureterectomy with a bladder cuff was performed (Fig. 2). Surprisingly, the final pathology finds an epithelioid granuloma with lymphocytic infiltration, suggesting a tuberculous aetiology. We prescribed anti-tuberculosis therapy for 9 months. After 12 months of follow-up, the patient remains in good health.



**Fig. 2. Nephro ureterectomy sample**

### 3. DISCUSSION

Urinary tuberculosis is a relatively common form of extra-pulmonary tuberculosis, accounting for 3-5% of all tuberculosis cases [1].

This localization of tuberculosis is notoriously difficult to diagnose, The search for Kochs bacillus in urine when it occurs in the genitourinary tract is not performed because the clinical aspect is not specific [2].

In most cases, it is the histological examination of the biopsy or excision parts that reveals the urogenital site. But at the beginning of the stage, medical treatment can prevent the occurrence of irreversible lesions. Most often, the diagnosis is made at the stage of sequelae: Caverns due to destruction of the parenchyma and stenosis of the urinary tract.

Radiological findings such as caverns in the kidney are pathognomonic symptoms, but caverns mean a late diagnosed complicated form, specific antibiotics can not cure the late lesions [3].

The case presented in this article illustrates this difficulty and shows that imaging can be misleading, indicating organ surgery when conservative treatment would have been possible.

If the disease is suspected, the interferon-gamma assay (ELISA), which produces an immune response against Mycobacterium tuberculosis, can aid in diagnosis. This technique called (Quanti FERON) shows better sensitivity and specificity compared to the classical intradermal tuberculin reaction [4].

The basic difficulty is to think of tuberculosis and try to diagnose it with the available techniques. In our case, endoscopic exploration could have avoided radical surgery. The site of endoscopy of the upper unit must be larger to avoid organ surgery.

In the early stage, renal tuberculosis can be cured without surgical intervention.

If diagnosed before surgery, four weeks of antituberculous therapy is recommended before surgery [5].

### 4. CONCLUSION

Tuberculosis of the urinary tract is rare and simulates carcinoma of the upper urinary tract,

especially from a radiological point of view. Clinical symptoms and radiological findings do not yet yield a diagnosis, which is only established by definitive histology after surgery or biopsy.

In our Maghreb countries, the differential diagnosis of a tumor of the upper urinary tract should include a diagnosis of tuberculosis of the urinary tract. A high level of suspicion is warranted. Preoperative diagnosis is recommended to avoid radical surgery.

We conclude with a question: do we have the right to propose the obligation to diagnose urothelial carcinoma of the upper urinary tract by uretero-rensoscopy and biopsy before radical surgery?

### DISCLAIMER

This manuscript was presented in a Conference. Conference name: Congrès de lamicale des urologues de sfax.

Available link:

[https://www.researchgate.net/publication/322603390\\_Renal\\_tuberculosis\\_presenting\\_as\\_upper\\_urinary\\_tract\\_tumor\\_a\\_case\\_report](https://www.researchgate.net/publication/322603390_Renal_tuberculosis_presenting_as_upper_urinary_tract_tumor_a_case_report).

### CONSENT

As per international standard or university standard, patients' written consent has been collected and preserved by the author(s).

### ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

### COMPETING INTERESTS

Author has declared that no competing interests exist.

### REFERENCES

1. Wise G, Marella V. Genitourinary manifestations of tuberculosis. Urol Clin N Amer. 2003;30:111–121.
2. Shalini Amukotuwa, Peter FM Choong, Peter J Smith, Gerard J Powell, John Slavin and Stephen M Schlicht. Tuberculosis masquerading as malignancy: A multimodality approach to the correct diagnosis – a case report.

- International Seminars in Surgical Oncology. 2005;2:10  
DOI:10.1186/1477-7800-2-10
3. Kulchavenya E. Some aspects of urogenital tuberculosis. Int J Nephrol Urol. 2010;2:351–360
  4. Ekaterina Kulchavenya. Best practice in the diagnosis and management of urogenital tuberculosis. Her. 2013;5(3): 143–151.
  5. DOI: 10.1177/1756287213476128  
Avradip Santra, Falguni Mandi, Abhishek Bandyopadhyay. Renal Tuberculosis Presenting as a Mass Lesion in a Two-year-old Girl Report of a rare case.Sultan Qaboos University Med J. 2016;16(1): E105–108.  
Epub. 2 Feb 16.

---

© 2021 Benatta Mahmoud; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

*Peer-review history:*  
*The peer review history for this paper can be accessed here:*  
<https://www.sdiarticle4.com/review-history/72960>