



Mastic Disease: A Sequel of Renal Tuberculosis

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Abbreviations: CT: Computed Tomography; TB: Tuberculosis.

Clinical Image

A 27-year-old male presented with lower back pain, dysuria, fatigue, night sweats, fever, and substantial weight loss during the preceding months. His medical history includes pulmonary tuberculosis. A CT scan was ordered to rule out some usual causes of renal colic, namely nephrolithiasis.

CT scans revealed a substantial amount of calcium density deposits in the superior pole of the right kidney's medulla often referred to as the "mastic kidney"; a consequence of a past infection of TB.

Tuberculosis remains a significant global health concern, with 1.5 million deaths attributed to this infectious disease in 2018. While it is commonly associated with lung infections, tuberculosis can also impact other organs, such as the kidneys, when the bacteria spread through the bloodstream [1].

The symptoms of renal tuberculosis are nonspecific and may resemble those of other renal diseases, leading to delayed or incorrect diagnosis which can exacerbate kidney damage and even result in chronic kidney failure. Furthermore, if left un-

treated, renal TB can spread to other organs, resulting in increased morbidity and mortality rates [2].

Numerous radiological signs can indicate the presence of renal tuberculosis, including the identification of a mastic kidney, which is the end-stage manifestation of the disease [3]. Such signs can also encompass renal calcifications, which are small, solid accumulations of calcium visible on X-rays or CT scans. These calcifications are often detected in patients with renal TB and could indicate the presence of a persistent infection. Additionally, renal TB may cause changes in the renal parenchyma, such as thinning of the renal cortex, scarring, and diminished kidney function, which may be visualized through ultrasound or CT scans [4] (**Figure 1 & Figure 2**).

The treatment approach for extrapulmonary tuberculosis, such as renal TB, typically involves a combination of anti-tuberculosis medications for at least six months [5]. Early and accurate diagnosis of extrapulmonary TB, as well as the awareness of its radiological appearance, remains crucial to prevent complications.



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Figure 1: Abdominal CT in axial section: Several parenchymal calcifications in the right kidney also called “mastic kidney”.



Figure 2: Frontal reconstruction of abdominal CT showing the superior calyces topography of the TB calcification.

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