

A Rare Case of Renal Sarcoidosis Presenting With Acute Kidney Injury and Hypercalcaemia

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Abstract

Background: Sarcoidosis is a multisystem granulomatous disorder most commonly affecting the lungs. Primary renal involvement is rare and often poses diagnostic challenges, particularly in the absence of respiratory symptoms.

Case Presentation: We report a 66-year-old male with a background of chronic obstructive pulmonary disease who presented with unintentional weight loss, anorexia, and fatigue. Laboratory investigations revealed stage 3 acute kidney injury with a creatinine of 299 $\mu\text{mol/L}$ and significant hypercalcaemia (2.91 mmol/L) with suppressed parathyroid hormone and low vitamin D levels.

Imaging demonstrated bilateral hilar and mediastinal lymphadenopathy with fibrotic interstitial lung changes. Myeloma screening was negative. Angiotensin-converting enzyme levels were markedly elevated. Renal biopsy confirmed granulomatous interstitial nephritis consistent with renal sarcoidosis.

Management and Outcome: The patient was treated with high-dose oral corticosteroids and a single dose of denosumab for refractory hypercalcaemia. This resulted in normalisation of calcium levels and significant improvement in renal function, with estimated glomerular filtration rate improving from 17 to 55 mL/min/1.73 m^2 on follow-up.

Conclusion: This case highlights renal sarcoidosis as an important differential diagnosis in patients presenting with unexplained acute kidney injury and hypercalcaemia, even in the absence of respiratory symptoms. Early recognition and prompt treatment can lead to favourable renal outcomes and prevent irreversible kidney damage.

