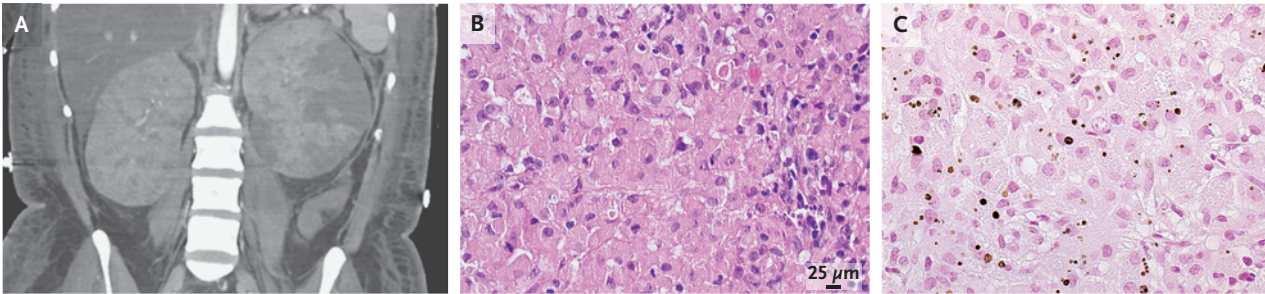


IMAGES IN CLINICAL MEDICINE

Stephanie V. Sherman, M.D., *Editor*

Renal Malakoplakia



Serena Bagnasco, M.D.
Samir C. Gautam, M.B., B.S.

Johns Hopkins University School
of Medicine
Baltimore, MD
sgautam6@jh.edu

This article was published on February 17,
2024, at NEJM.org.

A 33-YEAR-OLD WOMAN WHO HAD BEEN ADMITTED TO THE HOSPITAL FOR septic shock from *Escherichia coli* pyelonephritis was noted to have large kidneys on imaging. Computed tomographic imaging of the abdomen showed renal enlargement with heterogeneous decreased perfusion on both sides (Panel A). A subsequent biopsy of the left kidney showed histiocytic infiltration of the renal cortex (Panel B, hematoxylin and eosin staining) and round, basophilic intracytoplasmic inclusions, which are known as Michaelis–Gutmann bodies (Panel C, von Kossa calcium staining). A diagnosis of renal malakoplakia was made. Renal malakoplakia is a rare, chronic inflammatory disorder with a pathogenesis that is not well understood. It is thought to be triggered by defective intracellular killing of phagocytosed bacteria, particularly *E. coli*. It may manifest with recurrent urinary tract infections, which this patient had. The diagnosis is made on the basis of histopathological evaluation, particularly the finding of pathognomonic Michaelis–Gutmann bodies (which represent calcified elements of undigested bacteria within macrophages). Although malakoplakia most commonly occurs in immunocompromised patients, this patient had a normal immunologic evaluation. Owing to persistent bacteremia and progressive renal abscesses despite administration of antimicrobial agents, as well as worsening left kidney function, a left nephrectomy was ultimately performed. At follow-up 3 weeks later, the patient was feeling well and had normal renal function.

DOI: 10.1056/NEJMicm2301676

Copyright © 2024 Massachusetts Medical Society.