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Encrusted Cystitis

Michael H. Johnson and Seth A. Strope

Division of Urologic Surgery, Barnes-Jewish Hospital/Washington University School of Medicine

Abstract

We report a case of a patient who developed encrusted cystitis following transurethral resection of the prostate. This rare urologic condition is characterized by intramucosal calcifications and is commonly preceded by urologic instrumentation. Urea-splitting bacteria, most commonly *Corynebacterium urealyticum*, are the causative pathogen. Treatment is a combination of antibiotics, urine acidification and endoscopic removal of encrustations.

Keywords

endoscopy; infectious disease; hematuria; encrusted cystitis

An 81-year-old male presented to our facility after 6 months of recalcitrant gross hematuria and dysuria despite multiple transurethral resections of the prostate. Computed tomography and endoscopy revealed mucosal calcifications and inflammation. (Figures 1&2) Urine cultures revealed *Corynebacterium urealyticum*. He was treated with vancomycin and laser lithotripsy of calcifications. His hematuria and dysuria resolved following treatment.

Encrusted cystitis (EC) is a rare condition defined by bladder mucosal struvite calcifications. First reported in 1914, EC is caused by urea-splitting bacteria, often *Corynebacterium urealyticum*.¹ This member of skin flora is present in 12% of the population.² It is slow-growing and is often missed on rapid urine culturing.³ EC is generally preceded by urologic instrumentation. Treatment involves glycopeptides antibiotics, urine acidification, and removal of calcifications.⁴ *Corynebacterium* can form biofilms and may persist if calcifications are not completely removed.

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Corresponding author: Seth A. Strope, M.D., M.P.H. Division of Urologic Surgery, Washington University School of Medicine, 4960 Children's Place, Box 8242 St. Louis, MO 63110, USA.

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Figure 1.
Non-contrast CT of patient's pelvis, revealing circumferential mucosal encrustations (arrows) throughout the inferior (left) and superior (right) aspects of the bladder

Figure 2.
Left, Mucosal encrustations found on cystoscopy. Right, bladder wall after laser lithotripsy of calcification.