A Rare Case of Pure N4-acetyl-sulfaethoxazole Nephrolithiasis Associated with Trimethoprim-sulfamethoxazole Treatment of Pulmonary Nocardiosi

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Podium #98
A RARE CASE OF PURE N4-ACETYL-SULFAMETHOXAZOLE NEPHROLITHIASIS ASSOCIATED WITH TRIMETHOPRIM-SULFAMETHOXAZOLE TREATMENT OF PULMONARY NOCARDIOSIS
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Presented By: Alexander Geisenhoff

Introduction: Trimethoprim-sulfamethoxazole is a commonly used antibiotic for treatment of urinary tract infections (UTIs). It is also commonly used to treat nocardia infections. Less common are reports of nephrolithiasis consisting purely of N4-acetyl-sulfamethoxazole, the primary metabolite of trimethoprim-sulfamethoxazole.

Case: A 70-year-old male with history of mantle cell lymphoma and T-cell leukemia treated with bone marrow transplant now with nocardia lung infection receiving trimethoprim-sulfamethoxazole for the past 6 months who presented to the emergency room with confusion and a fall. He had no prior history of nephrolithiasis, but during hospitalization developed renal colic and was found to have obstructing right proximal ureteral calculi associated with declining renal function. The patient required ureteral stenting followed by interval ureteroscopy. During ureteroscopy, numerous small calculi were seen in the proximal ureter that were soft and dark orange in color. When he presented for stent removal 2 weeks postoperatively his stent was unretrievable and had to be removed later under general anesthesia. Stone analysis showed 100% N4-acetyl-sulfamethoxazole. The patient was referred to infectious disease for adjustment of antibiotic regimen.

Conclusion: Pure N4-acetyl-sulfamethoxazole stones are exceptionally rare and have only been documented in a few case reports in patients receiving long term sulfonamides. This case provides an important reminder that although uncommon trimethoprim-sulfamethoxazole related stones can lead to significant morbidity. Alternative antibiotics and treatment including alkalinization of the urine and diuresis can be considered for stone prevention and dissolution.

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Podium #99
BLACK BLADDER: A CASE OF BENIGN BLADDER HEMOSIDEROsis
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Introduction: A 68-year-old male with past medical history of obesity, nicotine dependence, and rheumatoid arthritis presents for evaluation of hematuria and dysuria. CT urogram demonstrates focal thickening of the anterior bladder with adjacent perivesicular stranding concerning for malignancy. Office cystoscopy demonstrates thickened bladder urothelium with black discoloration throughout the bladder (figure 1) in addition to bladder calculi.

Methods: Cystolitholapaxy and transurethral resection of the anterior bladder is performed for tissue diagnosis.

Results: Pathology demonstrates subacute and chronic cystitis with surface urothelium showing black coarse foreign pigmentation with underlying iron positive hemosiderin laden macrophages. Bladder calculi were composed of 100% magnesium ammonium phosphate (struvite). Subsequent serum iron studies performed show normal levels. No evidence of local or distant metastasis identified at one-year follow-up.

Conclusion: Only a few cases of bladder hemosiderosis have been reported in the literature. Hemosiderin is an intracellular storage form of iron that is produced by phagocytic digestion of hematin. Excessive iron storage in tissue is known as hemosiderosis. Almost all previously reported cases of bladder hemosiderosis have been associated with underlying malignancy. A possible explanation for this patient’s hemosiderosis could include reaction to infection associated with his bladder calculi, however, the ultimate etiology of his bladder hemosiderosis remains a mystery.