A Case of Peri-Ureteral Abscess Following Ureteroscopy with Laser Lithotripsy and Ureteral Stent Removal

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Introduction

This is a case of a patient with an extensive history of renal calculus disease who, following ureteroscopy with laser lithotripsy and ureteral stent placement, developed a peri-ureteral abscess, a rare complication of urological procedures, as well as a DVT and PE.

Case Description

The patient is a 58-year-old Caucasian female who first presented to the Emergency Department (ED) with a three-day history of right flank pain, fever, and nausea. CT imaging revealed multiple mid ureteral calculi measuring up to 6mm, resulting in severe proximal right hydronephroureter. The patient underwent cystoscopy, right ureteroscopy with laser lithotripsy, and ureteral stent placement. The remainder of her hospital course was uneventful and she was discharged on Day 5 with a 10-day course of Ampicillin and Ciprofloxacin.

The patient returned to the ED approximately 15-days post-discharge, complaining of acute abdominal pain, shortness of breath, nausea, vomiting, and diarrhea. Three days prior, she underwent ureteral stent removal as an outpatient. On presentation, vital signs were significant for tachycardia. Workup revealed subsegmental pulmonary embolism (PE), a gas-fluid filled abscess located adjacent to the right mid-ureter, and a distal right ureteral stone. Urology was consulted and the patient was admitted to medicine service for further management. On admission, lower extremity ultrasound was significant for an occlusive deep vein thrombosis (DVT) in the right lower extremity. Interventional Radiology performed CT-guided aspiration of the abscess with drain placement, along with IVC filter placement.

Discussion

It is imperative for emergency clinicians to be aware of and promptly recognize such possible, even rare, post-procedure complications. This case highlights that even a procedure as minimally invasive as laser lithotripsy, still imposes a reasonable amount of risk.[1,2] The specific complication of peri-ureteral abscess is exceedingly rare.[3] Risk factors for its development are obesity and diabetes, which our patient suffered from.[3] In addition, the prevalence of DVT or PE as a complication of laser lithotripsy with ureteral stent placement is not well documented in literature, further highlighting the unique presentation of the patient in our case study.[4] Survivability hinges on prompt recognition and treatment of these complications. More studies are needed to develop more comprehensive empiric management algorithms and reduce the rate of complications.

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