P027 Complete ureteral avulsion in left solitary functioning kidney

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Introduction & Objectives: Ureteroscopy is a standard procedure when treating ureteral or renal calculi. There are various complications that can occur intraoperatively, complete ureteral avulsion being the most fearsome. We discuss a case of complete ureteral avulsion, after URS procedure, in a patient with left solitary functioning kidney.

Materials & Methods: Patient is 44 years old, underwent a previous URS procedure for right ureteral lithiasis in 2013. In January 2016 patient reffered to ER complaining left flank pain. CT scan revealed II grade right hydronephrosis, UPJ stricture and renal cortical thinning and I grade left hydronephrosis due to 8mm, obstructive calculus in the lumbar ureter. Right UPJ stricture and renal deterioration were probably due to the previous URS procedure. Considering that patient had 1 stage CKD, with all signs of ulterior AKI and serum creatinine of 3,6 mg/dL, urgent left ureteral stenting/URS was planned. The procedure was performed by an attending urologist with 10 years of experience in endourology. Intraoperatively hydrophilic guidewire was positioned under fluoroscopy. 10Fr semirigid ureteroscope was introduced into left ureter with some difficulty owing to an ureteral stricture at level of iliac vessels, not inhibiting the progress until UPJ. After careful inspection of ureter, calculus identification, considering the clinical presentation and compromised renal function, it was decided to position only ureteral stent. There wasn't any difficulty or resistance during withdrawal of ureteroscope and no Dormia's basket was used. Nevertheless a delaminated urotelial mucosa and fragments of ureteral wall were visible in the bladder at the end of the maneuver. As a consequence retrograde ureteral stenting was impossible to perform, and a 10.3 Ch pyelostomy catheter was positioned. Postoperative CT scan showed a leakage in the subjunctional region of left ureter confirming the suspicion of complete ureteral avulsion. Three weeks later cystoscopy evidenced fluctuating and partially necrotic ureteral remnant, result of previous delamination and invagination in the bladder. Complete ileal-ureteral reconstruction was then performed. Subsequently patient developed a stricture of the pyelo-neoureteral anastomosis followed by multiple episodes of pylonephritis, AKI and metabolic acidosis that necessitated positioning of pyelostomy catheter. A second procedure was performed correcting anastomosis' stricture and stabilizing the patient.

Results: At two years follow-up patient has stage 1 CKD, but serum creatinine of 1,13 mg/dL, and no signs of left hydronephrosis.

Conclusions: Complete ureteral avulsion is extremely rare and tremendous complication that can happen to any urologists, even experienced ones, while performing endourologic procedures involving ureter or kidney. It is extremely difficult to manage and it is of utmost importance to recognize it immediately and treat it accordingly, especially in solitary kidney patients.