Clinical Case Studies and Reports

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A rare cause of abdominal pain: Renal calix rupture

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Abstract

Spontaneous rupture of the renal calix and urinary extravasation are very rarely encountered in Emergency Department. 44 years old male patient was admitted to emergency department with abdominal pain,right side pain. The patient developed a sudden onset of renal colic pain without any trauma. Stone and rupture detected on the CT.

Introduction

Ureteral stones are 20% of urinary tract stones. Seventy percent of ureteral stones are located at distal ureter. Effective and safe passage of distal ureter stones is mediated by observation or medical expulsive treatment [1]. Most of stones located at distal ureter pass spontaneously under observation; however, some are complicated with urinary tract infection, hydronephrosis, and renal function disturbances. Urine extravasation from the renal collecting system or renal pelvis is a rare condition. When urine extravasation happens, it is generally related to obstruction, trauma, or previous urinary tract surgery [2].

Case Report

A 44-year-old male patient was admitted to our emergency department with abdominal pain and right side pain, which started 2 hours before. Nausea and vomiting were present. Physical examinations; the general condition of the patient was good, blood pressure 120/80 mmHg, pulse 80 / minute, respiration rate 14 / minute, conscious open, orientad and cooperated. Abdominal examination showed abdominal distention, intestinal voices hyperactive, right-sided costovertebral angle tenderness. The vein was opened by catheter and the patient was started isotonic at 250 mL / hour. Complete blood count (leukocyte 23,000 / μL, normal for other parameters), complete urine analysis (10 erythrocytes per site), creatinine 1,42 mg / dl in biochemical tests, direct urinary system graphy (stone not visible). The patient was treated with 20 mg of ampicillin N-butylbromide and 50 mg of dexketoprofen intravenously (iv). The patient, whose pain was not diminished, was administered intravenously with 50 mg of saline. Urinary system ultrasound (USG) was performed on the patient's absence of urine output and aggravation of pain. Computed tomography was performed for the purpose of examining the perineal fluid in USG. A stone in CT and a rupture in the superior calyx on the right side (Figure 1) were detected. The patient was urgently consented for urology and was taken operating. The patient was discharged on the 5th postoperative day.

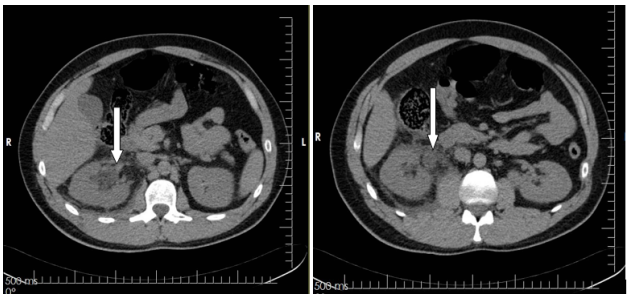

Figure 1. A rupture in the superior calyx on the right side

Discussion

Renal calix rupture is an extremely rare condition. The most common abnormalities that have been reported are lithiasis, tumors, stricture, ruptured renal cysts, retroperitoneal fibrosis, congenital anomalies, postradiation scarring, pregnancy, renal transplants, vesicoureteral reflux, and urinary tract infection [2,3]. Treatment is according to underlying pathology. Double J catheter or percutaneous nephrostomy is urinary diversion method to be used especially in the presence of small ruptures. Open surgery can be an option in difficult cases associated with extensive rupture of renal pelvis [4].

References

1. V Tzortzis, C Mamoulakis, J Rioja, S Gravas, MC Michel, et al. (2009) Medical expulsive therapy for distal ureteral stones. *Drugs* 69: 677-692. [Crossref]
2. E Huri, A Ayyildiz, B Nuhoğlu (2007) Germiyanoğlu spontaneous rupture and emergency repairment of the renal pelvis. *Int Urol Nephrol* 39: 413-415.
3. G Ransford, E Young, M Castellan, A Labbie (2013) Renal pelvis rupture in a kidney with ureteropelvic junction obstruction and extrarenal calyces. *J Pediatr Urol* 9: e127-e130. [Crossref]
4. J Bogdanovic, J Djozic, S Idjuski, M Popov, V Sekulic, et al. (2002) Succesful surgical reconstruction of ruptured renal pelvis following blunt abdominal trauma. *Urolo Int* 68: 302-304.

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