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A. Antonelli , A. Peroni , M. Furlan , C. Palumbo , S. Zamboni ,
A. Veccia , C. Simeone

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A.Antonelli alessandro_antonelli@me.com
A.Peroni peroniangelo@gmail.com
M.Furlan mariachiara.furlan@gmail.com
C.Palumbo palumbo.carlotta@gmail.com
S.Zamboni stefania.zamboni@libero.it
A.Veccia a.veccia88@gmail.com
C.Simeone claudio.simeone@unibs.it

Urology Unit, ASST Spedali Civili, Brescia, Italy, Department of Medical and Surgical Specialties,
Radiological Science and Public Health, University of Brescia
Piazzale Spedali Civili n.1 25121 Brescia Italy

Corresponding author:

Maria Furlan mariachiara.furlan@gmail.com
Urology Unit, ASST Spedali Civili, Brescia, Italy, Department of Medical and Surgical Specialties,
Radiological Science and Public Health, University of Brescia
Piazzale Spedali Civili n.1 25121 Brescia Italy
Phone: +39 0303995217 mobile:+39333 3799032

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Abstract

Objective

To show how to perform a robot-assisted partial nephrectomy and bilateral pyelolithotomy in ectopic pelvic kidneys. This is a congenital abnormality of position and rotation¹ frequently associated with urolithiasis². Renal cell carcinoma is a very rare event in pelvic kidneys³⁻⁴. These two findings in the same patient could be a surgical challenge and whenever possible a “one stage” treatment is preferred.

Materials and Methods

A 44-years old male with bilateral pelvic kidneys admitted because of left back pain. Abdominal CT scan showed a 17 mm stone in the left renal pelvis, a 12 mm stones in the right pelvis and a 34x27 mm right lower pole renal mass. A robotic surgery was indicated. Patient was placed in Trendelenburg position with ports configuration as for transperitoneal radical prostatectomy. The right kidney was firstly approached: after isolation of the ureter and suspension of the renal artery, a clampless partial nephrectomy was performed; then through a longitudinal pyelotomy the stone was extracted. To minimize the opening of the posterior peritoneum covering the left kidney, the site of the stone was identified by intraoperative ultrasound; then, through a longitudinal pyelotomy the stone was extracted. Given the watertight sutures and the lack of ureteral obstructions no pigtailed ureteral catheters were inserted. A Jackson-Pratt drainage was placed through the inferior port.

Result

Consolle time was 190 minutes. EBL was 50 mL. No complications were reported. The drain was removed on the second postoperative day, assessed that creatinine dosage was equal to serum. The length of stay was 4 days. Histopathology showed a pT1aG2 clear cell renal cell carcinoma with negative surgical margins, while stones analysis was calcium oxalate.

Conclusions

With the availability of robotic technology, the indications for minimally invasive surgery may be safely expanded to include concomitant morbidities in uncommon presentations.

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