



Rare Open Surgery for Nephrolithiasis

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Case Report

A 65-year-old woman had been presented with 2 weeks right lumbar pain and history of two UTI in the past 6 months. On U/S examination, there was a clearly visible hyperechoic stone in the central part of the right kidney w/o any obstruction. The CT scan had proved 14.1 x 6.9mm asymmetrical stone stucked in central pelvis with post-inflammatory changes around it. (Figure 1). The patient had allergy on Indomethacin, Ibuprofen and other non-steroidal pain killers indicating long-lasting and recurrent painful urological troubles. The open pyelolithotomy was suggested to prevent fragmentation with scattered residual stones with possible additional sandwich therapy and UTI to follow. Through regular intercostal right sided incision, the perirenal area was reached, but the kidney was encapsulated in the firm envelope of irregular connecting tissue. The pelvis was not identified until the fragile ureter was detached from bulky fibrous lump. Even now the stone could not be palpated, and renal vessels prevented straight entering the renal hilus. Bowed stone extractor was used to grab the stone without actually seeing it and after alignment long stone axis to the pelvic opening, it was smoothly removed not causing any further harm. After stone removal, the suture of the ureter on the pelvic brim was virtually impossible, since no pelvis wall was identifiable and ureteral stump was considerably short and irregular. The reconstructive approach was adopted and the connective tissue surrounding the presumed pelvis was closed with No. 1 Vicryl. The Guillotine- like slice cut was done through the bottom third of the right kidney to expose the neck of the lower calyx. After parenchymal bleeding control, the ureteral stump was spatulated and sewn over a 7 F double pig-tail stent onto the caliceal neck with 3-0 Vicryl tension-free. A Penrose drain was inserted for 4 days and removed when dry. Indwelling catheter was removed after ten days and patient was discharged. The CT scan after 6 months shows the result (Figure 2). Uretero-calyceal anastomosis is not a frequent reconstructive approach for the upper urinary tract and usually it

is not a planned procedure. It has its sense only if the kidney is worth to be saved (if planned, no less then 20% of kidney function should be seen on gamagraphy). [1-3] The feasibility of normal pyelo-ureteral alignment may be difficult or impossible from various reasons, mainly due to the local findings on surrounding organs ("burried pelvis" in this case stucked in firm scars after previous UTIs, etc.). Two important points have to be beared in mind regardless if done through open or laparoscopic approach: the suture needs to be tension-free without urinary leakage post-operatively and both anastomotic endings must be well perfused. No acute bleeding, especially from renal parenchyma, is permissive when starting the anastomosis, since perianastomotic haematoma may be compressive and hence ischemic on the both ends of intended reconstruction. The draining stent should be extracted in 3-4 weeks time, but post-operatively is very important to leave indwelling catheter in the bladder at least for 10 days to prevent anastomotic urinary leak resulting in later anastomotic stricture.



Figure 1.

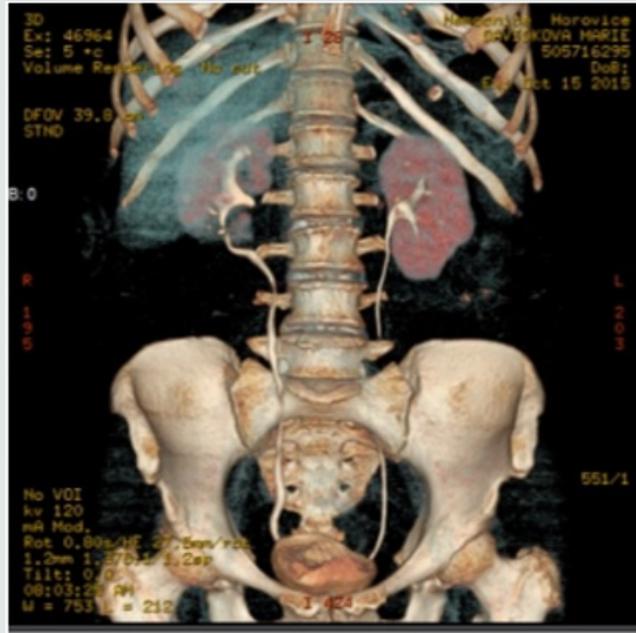


Figure 2.

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