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MP23-13 PCNL TRAJECTORY TO PREDICT SUCCESS IN SUPINE PCNL: A NOVEL CONCEPT
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Introduction: Supine PCNL confers certain advantages over prone. Access parameters change with positioning. Supine position limits maneuverability of instruments, limiting access to upper & mid-pole stones. We aim to determine predictive factors for success of supine PCNL through road-mapping of PCNL trajectory.

Material & Method: Consecutive patients undergoing PCNL from July-Dec 2010 were recruited. Choice of position was made by surgeon. Tracts were performed under USG & fluoroscopy. Distances and angles were measured intra-operatively with rigid and flexible nephroscope, and correlated with pre-operative imaging.

Results: 19 patients underwent PCNL (13 supine, 6 prone). Stone load was comparable in both groups. Overall stone clearance after single PCNL was 74%. Regardless of abdominal thickness and approach, all lower pole and renal pelvic stones were reached with mean excursion of 140 mm in supine & 105 mm in prone position. Mean entry angle was 59 for supine, and 35 for prone.

In supine PCNL, the upper pole was reached in 4 of 11 tracts, with mean excursion of 172 mm & entry angle of 33. Similarly, 2 of 11 supine PCNL reached middle pole. Conversely, all prone PCNL tracts reached upper & middle pole with decreased excursion & angle.

Conclusion: PCNL in prone position can reach renal pelvis and 3 poles via lower pole puncture. PCNL trajectory may be a tool to predict success in supine PCNL by estimating chance of reaching mid & upper pole.

Skin to upper pole distance larger than 185mm and entry angle more than 48 degrees decrease chance of upper pole access.

MP23-14 CONVENTIONAL-PNL VS MINI-PNL: COMPLICATION CLASSIFICATION ACCORDING TO A MODIFIED CLAVIEN GRADING SYSTEM.
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Introduction: Percutaneous Nephrolithotomy (PNL) is an effective minimal-invasive therapy of kidney stones. However, major complications are reported on a regular basis. The significance of miniaturized PNL (Mini-PNL) regarding a reduced complication rate is controversially debated. Diversity in interpretation of perioperative morbidity complicates the comparison of studies. Aim of this study was the comparison of our PNL- and Mini-PNL-cases by means of a modified Clavien grading system.

Material and methods: We reevaluated the data of our prospective collected PNL database. All PNL- and Mini-PNL-interventions since 01/1998 were included, matching a total of 386 cases with complete documentation (308 conventional PNL vs 78 Mini-PNL). Excluded were complex surgeries, as in case of anatomical malformation, concomitant ureter stones or after urinary diversion. We used the modified Clavien grading system according to Sarikaya et al., J Urol 2011. All patients received a perioperative antibiotic prophylaxis beginning on the preoperative day, respectively an antibiotic treatment according to test results. Tract diameter was 26F for PNL and 18F for Mini-PNL. At the end of the procedure, a nephrostomy tube of 22 respectively 14 Fr was inserted, or an antegrade 6 Fr DJ was placed.

Results:

Conclusion: Our study confirms the low morbidity of percutaneous stone therapy.

MP23-15 TREATMENT OF CALYCEAL DIVERTICULAR CALCULI ON MINIMALLY INVASIVE PERCUTANEOUS NEPHROLITHOTOMY: A REPORT OF 24 CASES
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