P007 Impact of ureteral access sheath on renal stone treatment: Prospective comparative non-randomised outcomes over a 7-year period

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Introduction & Objectives: The use of ureteric access sheaths (UAS) for treatment of renal stones has risen over the last decade. However, questions still remain regarding the safety and clinical outcomes with use of access sheaths. This study looks at the role of UAS for ureteroscopic treatment of consecutive renal stones over a period of 7-years at a specialised centre.

Materials & Methods: Outcomes of flexible ureteroscopy and stone treatment (FURS) for renal stones with and without the use of UAS was prospectively compared from March 2012 to July 2018. Patients were divided into two groups for stone treatment; Group-1 (UAS use) and Group-2 (no UAS use). Data was collected prospectively on consecutive patients including demographics, stone size, location and number of stones, pre and post-operative stent usage, operative time duration, stone free rate (SFR), length of stay and complications.

Results: During the study period 338 patients underwent FURS for renal stones, of which a UAS was used for 203 (60%) patients. The mean age of patients was 56 years (range 2-89 years) with a male: female ratio of 204:134. The mean cumulative stone size and the mean number of stones were 16.5±10.8 mm and 11.37±8.08 mm (P<0.001), and 2.17±1.99 and 1.66±1.50 (P=0.009) for Groups 1 and 2 respectively. The pre and post-operative stent insertion rates were similar in both groups. Procedural time was longer in Group-1 (54.8±25.8 minutes) compared to Group-2 (41.3±22.2 minutes) (P<0.001). The SFR for Group-1 (88%) was reduced in comparison to Group-2 (94%), but not statistically significant (p=0.07). There were no intra-operative complications in either group. Post-operative complications were seen in 8 patients in Group-1 (7 Clavien I/II; stent pain/urinary tract infections and 1 Clavien IVa; urosepsis requiring intensive care management) and 2 patients in Group-2 (Clavien I; clot retention, stent pain) (P=0.19).

Conclusions: The use of UAS for renal stones is safe with no intra-operative complications noted in our series. Good stone free rates were obtained for large and multiple renal stones with a small risk of minor complications post-operatively.