P008 Is retrograde intrarenal surgery really safe for solitary kidney's stones?

EUR Urol Suppl 2019;18(7):e2736

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Introduction & Objectives: The management of urolithiasis in patients with a solitary kidney is challenging for endourologists. This study was aimed at evaluating the safety of retrograde intrarenal surgery (RIRS) in the treatment of renal stones in such patients and questioned how it can be more secure.

Materials & Methods: Between January 2015 and March 2019, we enrolled 53 patients who had a solitary kidney and underwent RIRS and holmium: yttrium-aluminum-garnet lithotripsy for the management of renal stones. We collected data pertaining to the preoperative patient characteristics, stone dimensions, and postoperative outcomes. Serum creatinine levels were evaluated preoperatively and at 1 day postoperatively follow-up Surgical complications of the patients were assessed using modified Satava classification system (SCS). Stone size, duration of operation, duration of fluoroscopy, type of anesthesia, degree of surgical complication was evaluated retrospectively. Surgery performed in less and more than 60 minutes and with and without any complication was compared.

Results: Totally 53 solitary kidney stone patients were evaluated. The mean stone size was 14±0,4 cm in our surgeries and our surgical success was 87.3%. In our study, 13 patients (24.5%) had grade 1- minor complications and no one need for blood transfusion. The mean operation time was 51.9 ± 17.3 min. Postoperatively hematuria was observed in two patients. Postoperative creatine values of 6 postoperative patients increased. Normal values were reached by hydration. In 2 patients, came back with anuria on the 5th and 6th days postoperatively. The creatine values were not decreased and the patient was taken to the dialysis program with the suggestion of nephrology. The age, sex, side of kidney and stone size distribution of the patients with and without complication did not differ significantly. The duration of operation in the group with complications was significantly higher than the group without complications. The preoperative creatinine value was not significant n the group with or without any complication. In the group with any complication, postoperative serum creatinine increase was significantly higher than the group without complication. The operation time was in ≥ 60 min. groups, stone size, duration of scopy time and any complication rate were significantly higher than ≤60 min. group.

Conclusions: When applying RIRS in patients with solitary kidney, ureteral access sheat should be used and it is important in terms of safety to insert DJ stents at the end of the procedure. Postoperative urine output and serum creatine values should be checked in all patients and we suggest that appropriate hydration and DJ stent should be reviewed if any anuria or creatine is elevated. We do not recommend surgery more than 20 mm stone size and more than 60 minutes surgery time in solitary kidney stones, except in special cases.