

The Efficiency of Semi-rigid Ureteroscopy in Treatment of Upper Ureteral Calculi

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ABSTRACT

Introduction and objectives Flexible ureteroscopy (fURS) has become a widely utilized diagnostic and therapeutic tool for upper urinary tract Calculi. The purpose of this study was to evaluate the outcome of semi-rigid URS in compare to fURS in treatment of upper ureteric stone

METHODS

Methods Retrospective comparative analysis of 155 patieny with proximal ureteric stone underwent either fURS or Semi-rigid URS with the aid of Holmium:Yttrium Aluminium Garnet (YAG) laser between 2021 and 2022 in Ibnsina Specialized Hospital. The patients were divided into 2 groups according to the operation type. Group A included 104 (60M, 44F) patients who were treated with semi-rigid URS and group B included 52 (30M, 22F) patients treated with fURS. Each group was compared in term of successful access, stone diameter, operation time, need for second look, stone complete fragmentation and complication considered in the analysis

RESULTS

Average age of group A 45.1 years (20 – 76), and 48 years (20 – 69) in group B, average time of surgery in group A was 27 minutes (15 – 55), and 51.8 minutes (30 – 82) and the mean stone size is 1.6 cm (1.2 -2.0) in group A and 1.5 cm (1.2 – 1.9). Successful access was achieved in 192/104 (98.1%) of the patient in group A and all of the patient in group B, initial stone free status was 96/104 (92.3%) of the patient in group A and 47/52 (90.4%) of the patient in group B, need for second look was required in only 8/104 (7.7) of patient in group A and only 5/52 (9.6%) of the patient in group B. In group A mucosal injury in 22/104 (21.2%) of patients but not interrupted surgery, false passage in 12/104 (11.5%) of patients but also not interrupted surgery or stone clearance, ureteric perforation was only in 1/104 (1.0%) patient, stone migration in only in 4/104 (3.8%) of patients. In group B mucosal injury in 3/52 (5.8%) of patients, stone migration in only 4/48 (7.7%) of patients, no false passage, no ureteric perforation No ureteric avulsion in both groups

CONCLUSIONS

Semi-rigid URS in compare to fURS have proved to be an effective and safe procedure with minimal complications

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