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Ureteric stenting versus non-stenting following uncomplicated ureteroscopic lithotripsy: A prospective randomized trial

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Introduction & Objectives: There is no consensus about whether a double-J ureteric stent (DJ-US) should be placed following uncomplicated ureteroscopy for stone retrieval. This study aimed to compare three groups of patients who underwent uncomplicated ureteroscopic lithotripsy (URSL) and to evaluate whether stents could be eliminated after the procedure.

Materials & Methods: A total of 105 patients underwent uncomplicated URSL for ureteric stones were prospectively randomized into three groups: Group 1 (34 patients) with DJ-US, Group 2 (35 patients) with DJ-US on extraction string, and Group 3 (36 patients) with no DJ-US after the procedure. The outcomes measured were; postoperative Visual Analog Score (VAS) for flank pain and dysuria score, urgency, frequency, suprapubic pain, hematuria and analgesia requirement. In addition, operative time, re-hospitalization, and return to normal physical activity.

Results: Mean operative time was significantly longer in Groups 1 and 2 compared to Group 3 [mean time \pm SD, 22.2 \pm 9.1 min, 20.2 \pm 6 min, 15.1 \pm 7.1 min respectively, $p < 0.0001$]. The results of the VAS for flank pain and dysuria scores, urgency, frequency, hematuria, and suprapubic pain showed a significant difference at all time points of follow-up, with significantly higher in Groups 1 and 2 compared to Group 3. Further analysis showed that measured outcomes, and analgesia need for Groups 1 and 2 were similar, at all time points except at week 1 and 1 month where Group 2 patient's had less symptoms.

Conclusions: DJ-US placement appear to be unnecessary in procedures considered uncomplicated by operating urologists at the time of surgery. The advantages of DJ-US with extraction string over DJ-US only include earlier and easy removal with earlier relief of symptoms, and less analgesia requirements.