

Efficacy of a Single Session Ureteroscopy with Holmium Laser Lithotripsy for Multiple Stones

Introduction and Objectives: Multiple stones are reported to be found in 20-25% of patients with urolithiasis. Although any guidelines for multiple stones have not been well established yet, 'multiple stones' is a powerful adverse factor influencing the treatment outcome after shockwave lithotripsy. Herein we present our most recent experience of a single session ureteroscopy for multiple stones and determine its efficacy.

Materials and Methods: Between September 2008 and March 2012, 54 patients with multiple stones (total 158 stones) in different locations (unilateral 40, bilateral 14) underwent a total of 68 procedures of ureteroscopy. The number of procedures, operative time, stone-free rates, stone compositions and complications were evaluated. Stone-free status was defined as no residual fragments in the ureter and the absence of residual fragments >2 mm in the kidney.

Results: Mean stone number per patient was 2.9. Mean stone burden (cumulative stone length) was 21.4 mm. Mean number of procedures was 1.3. Overall, the stone-free rate after a single session was 81.5% (44/54). In patients with stone burden <20 mm and ≥20 mm, the stone-free rate after a single session was 92.3% (24/26) and 71.4% (20/28), respectively. No major intraoperative complications were identified.

Conclusions: Our findings suggest that ureteroscopy is an efficient treatment for multiple stones. For patients with stone burden <20 mm, either unilaterally or bilaterally, a single session ureteroscopy is a favorable option that promises high stone-free rate.