Baskets, Ureteral Access Sheaths, and Stents do not affect the Stone Free Rate in Ureteroscopy in Obese or Normal Weight Patients

Introduction and Objective: Shockwave lithotripsy may not be an option in obese patients. We determined the effectiveness of ureteroscopic laser lithotripsy in obese patients compared to controls.
Materials and Methods: Patients who underwent ureteroscopic procedures for urolithiasis at four centres with fellowship-trained endourologists were retrospectively analyzed.
Results: The 292 patients included 163 obese (BMI ≥ 30 kg/m2), 76 overweight (BMI = 25-30), and 53 normal weight controls (BMI <25). There were significantly more patients in ASA categories 2, 3, and 4 in the overweight and obese groups. The rate of diabetes was significantly higher in the obese and overweight groups (P=0.0240). The percentage of obese patients requiring flexible ureteroscopy (79%) was higher than in the other groups (P<0.0001). Stone free rate (SFR) did not differ among groups. Flexible ureteroscopy was associated with a lower stone free rate on multivariate analysis (p=0.034). There was no difference in SFRs of patients who required a ureteral access sheath, basket extraction, or received a post-operative stent. The complication rate did not differ between groups, although patients with an elevated BMI were less likely to have day surgery.
Conclusions: SFRs are similar in obese and overweight populations to normal weight patients. The decreased SFR seen with flexible ureteroscopy was likely due to more proximal stone locations. Higher BMI was associated with a longer hospital stay. Ureteroscopic laser lithotripsy is an effective and safe technique to treat urolithiasis in the overweight/obese patient. The use of stents, baskets, or access sheaths did not affect the SFR in any group.