NEW DIGITAL SINGLE-USE FLEXIBLE URETEROSCOPE (PUSEN™): FIRST CLINICAL EXPERIENCE
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INTRODUCTION AND OBJECTIVES: We report the clinical results of flexible ureteroscopy using the new digital single-use flexible ureteroscope from PUSEN™ (New South Wales, Australia). This device has an outer diameter of 9 Fr, with a working channel of 3.6 Fr. The deflection system has both options of standard and reverse modes with maximum deflection of 270° in both directions.

METHODS: Between August and October 2016 we performed flexible ureteroscopy (FUR) using the new device. The primary outcome was stone free rates, secondary outcomes were total time of the procedure, total time of fluoroscopy and perioperative complications. The tertiary outcome was the behavior of the instrument during and at the end of the procedure.

RESULTS: A total of eleven FUR were performed. The present study included eight male patients and three female patients, with an average age of 39 years (range 23-65 years). All the patient were treated using a 12 Fr access sheath and holmium laser lithotripsy (260 μm fiber). The average stone size was 6 mm (range 4-10 mm), and stones were located as follow: 3 in proximal ureter, 6 in renal pelvis and 2 in lower calix. Total time taken to complete the surgery was 45 minutes (range 25-85 min). The number of stones treated per patient varied between 1 and 4. Mean fluoroscopy time was 50 seconds. We achieved 100% stone free rate in eight cases and 80% in the remaining three. One patient present an ureteral wall injury, with mucosal erosion at time of ureteral access sheath placement. A double J stent was placed in all patients. The device behaves properly during and at the end of the procedure, there was no loss in image quality or deflection capacity, being able to safely finish all the cases carried out.

CONCLUSIONS: With respect to outcomes evaluated in this study with the PUSEN™ digital single use flexible ureteroscope seems to be similar in comparison to reusable flexible ureteroscope. The clinical results achieved in the present study suggest that this device could be considered a valid method to treat endoscopically renal and proximal ureteral stones reducing maintenance costs.

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UNPLANNED EMERGENCY DEPARTMENT VISITS AND HOSPITAL ADMISSIONS FOLLOWING URETEROSCOPY: DO URETERAL STENTS MAKE A DIFFERENCE?
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INTRODUCTION AND OBJECTIVES: The comparative effectiveness of ureteral stents placed during ureteroscopy for urinary stone disease is widely debated. We sought to evaluate unplanned medical visits within the early post-operative period after ureteroscopy in patients with and without ureteral stent placement.

METHODS: We identified all ureteroscopic procedures for urinary stone disease in the California Office of Statewide Health Planning and Development (OSHPD) database from 2010-2012. The primary outcome was any emergency department visit or inpatient hospital admission in the first 7 days following ureteroscopy. Patients were sub-categorized by type of ureteroscopy (i.e. laser lithotripsy, basket retrieval, diagnostic) and analyzed for significant differences between stented and unstented patients. Multivariable logistic regression was performed to determine if ureteral stent placement was independently associated with unplanned visits.

RESULTS: Our analytic cohort included 17,129 patients undergoing 18,860 ureteroscopy procedures. A ureteral stent was placed in 86.2% of patients undergoing laser lithotripsy, 70.5% of patients receiving basket retrieval, and 54.0% of patients undergoing diagnostic ureteroscopy. In the 7 days following ureteroscopy, 6.6% of patients were seen in the emergency department and 2.2% of patients were admitted. In a fully adjusted model, the utilization of a ureteral stent was not associated with emergency department visits or inpatient admissions.

CONCLUSIONS: Ureteral stent placement during ureteroscopy does not increase the odds of emergency department visits and inpatient admissions in the early post-operative period.

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