

## Retrograde intrarenal surgery using the single - use flexible ureteroscope Uscope 3022 (Pusen<sup>™</sup>): evaluation of clinical results.

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## Abstract

**INTRODUCTION:** Reusable endoscopes have some limitations regarding their continued use. To sort out these problems, several disposable devices have appeared on the market. Our objective is to show our clinical results with a new digital flexible single-use ureteroscope.

MATERIALS AND METHODS: This study presents a prospective series of patients who underwent endoscopic surgery as treatment for renal stones using the digital disposable endoscope Uscope 3022<sup>™</sup>. Demographic, procedure and stone information were registered including surgery time, stone-free rate, need of ureteral catheterization and complications, among others. The behavior of the ureteroscope in terms of image quality and problems associated with flexibility and the working channel were also registered.

**RESULTS:** A total of 71 procedures were included in the analysis. The mean age was 49.9 years old, with 70.4% of male patients. Mean stone size was 11.4 mm (4 to 40 mm). The most frequent stone location was in the lower calyces (28.2%). The stone burden was high (>2 cm) in 8.4% of patients. The mean surgical time was 56.6 minutes (15-180 min). In 94.4% of the cases, a laser was used with dusting parameters. The global stone-free rate (SFR) was 95.2%, but in the subgroups analysis SFR were significantly superior in stones less than 10 mm (97.9%) versus stones between 10 and 20 mm (94.5%) and greater than 20 mm (78.3%) (p <0.01). The postoperative placement of double-J stents was required in 66.2% of patients. Two minor complications were recorded and they were related to the ureteral access sheath used. There were no problems regarding the performance of the ureteroscope.

**CONCLUSIONS:** The clinical data observed in this series does not differ from the results traditionally obtained with other reusable devices. To our knowledge, this series is the first worldwide report evaluating the clinical behavior and results in humans of the Uscope 3022.

KEYWORDS: retrograde intrarenal surgery; ureteroscopy; urolithiasis

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