22 Impact of preoperative ureteral stenting on ureteroscopic findings: A propensity score matching analysis

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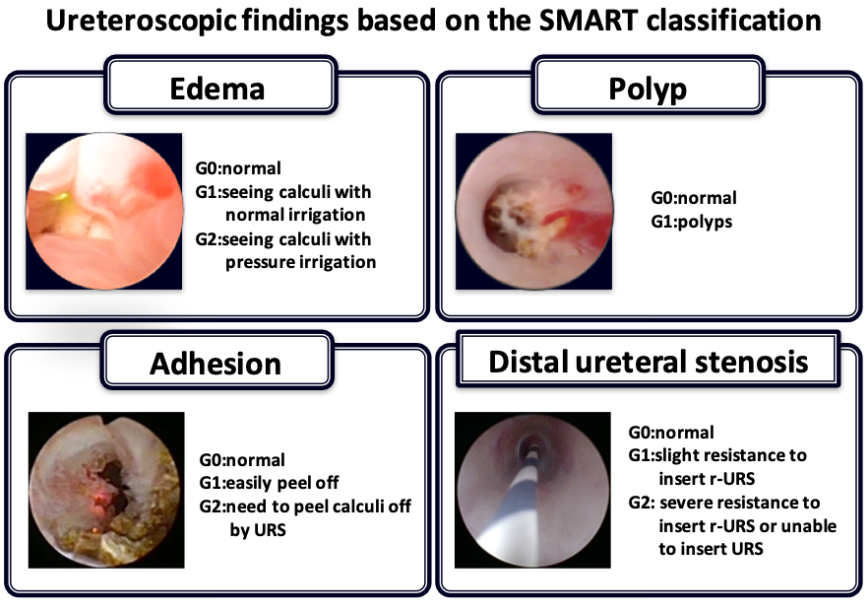
Hamamoto S. [1], Sugino T. [1], Hasebe K. [1], Isogai M. [1], Taguchi K. [1], Ando R. [1], Inoue T. [2], Okada S. [3], Okada A. [1], Matsuda T. [2], Yasui T. [1], SMART Study Group

[1]Nagoya City University Graduate School of Medical Sciences, Dept. of Nephro-Urology, Nagoya, Japan, [2]Kansai Medical University Medical Center, Dept. of Urology, Osaka, Japan, [3]Gyotoku general Hospital, Dept. of Urology, Chiba, Japan

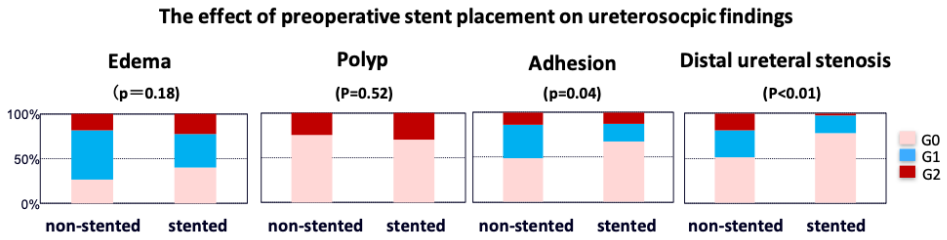
Introduction & Objectives: The ureteral stent placement before ureteroscopic lithotripsy (URSL) has been reported to facilitate ureteroscopic management of urolithiasis. However, no report has evaluated the ureteroscopic findings after stent placement. In this study, we examined the effect of preoperative ureteral stenting on ureterosocpic findings.

Materials & Methods: Among the 832 patients who underwent URSL, and were registered in the SMART study group from January 2014 to February 2017, 241 cases of single ureteral stones were analysed. The patients were divided into non-stented group (n=185) and a stented group (n=56).We evaluated the surgical outcome and endoscopic findings (edema, polyp, stone adhesion, distal ureteral stenosis), prospectively, based on the SMART classification.



Results: Owing to differences in patient characteristics, a 1:1 propensity score matching was performed. In the final matched cohort, 96 cases (48 non-stented vs 48 stented) were available for analysis.The average stone size was 8.3±2.9 and 8.3±2.8 mm, respectively. The mean operation time was not significantly different between the two groups (44.5±16.7 vs 47.6±26.8 minutes). However, stone free rate in the stented group was significantly higher than in the non-stented group (83.3 vs 95.7%, p= 0.04). Based on our endoscopic findings, the grade of edema (p=0.18) and

polyps (p=0.52) at the stone site, were not significantly different between the two groups. However, the grade of stone adhesion (p=0.04) and distal ureteral stenosis (p<0.01) in the stented group were significantly better than those observed in the non-stented group.



Conclusions: Ureteral stent placement is associated with better endoscopic findings of stone adhesion and distal ureteral stenosis, and may result in a safe and efficacious procedure for URSL. If severe stone impaction is expected, preoperative stent placement is one of the choices that can be performed in an ideal URSL.