

P026 Retrograde holmium: YAG laser endoureterotomy in the treatment of postoperative ureteral strictures following endoscopic stone surgery

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Introduction & Objectives: Ureteral obstruction due to ureteral stricture may result from complications during stone surgery, such as perforation or ureteral wall damage with the endoscope and working instruments, or ischaemia due to impacted stones. With the advancements in endoscopic and laser technologies, Holmium: YAG laser endoureterotomy and endopyelotomy have been increasingly used for the minimally invasive treatment of postoperative ureteral strictures. The objective of this study is to investigate the efficacy and safety of Holmium laser endoureterotomy for the treatment of postoperative ureteral strictures following endoscopic stone surgery.

Materials & Methods: 19 patients with postoperative ureteral strictures following endoscopic treatment of urolithiasis underwent Holmium laser endoureterotomy between May 2017 and March 2019. All patients underwent preoperative contrast imaging study to assess the severity and length of the stricture. In 9 patients the postoperative stricture was located in the ureteropelvic junction, 7 patients had stricture in the proximal ureter and 3 – in the distal ureter. A retrograde ureteroscopy with Holmium laser incision of the stricture was performed in all patients. At the end of the procedure a 7/12Fr endopyelotomy stent was placed in 5 patients and a 7Fr ureteral stent JJ – in 14 patients. Follow-up was performed on 3rd postoperative month with contrast imaging study.

Results: Patients' mean age was 52.6±16.0 years and male-to-female ratio - 52.6%/47.4%. Mean operative time was 46.8±6.9 min and mean stent removal time - 38.2 ± 7.5 days. There were no intraoperative complications. Most common postoperative complication was postoperative fever in 4 patients (21.1%), which required antibiotic treatment. At 3rd month of follow-up reduction in hydronephrosis degree and improvement of clinical symptoms was observed in 15 patients (78.9%). 4 patients (21.1%) had recurrence of the ureteral stricture. Renal scintigraphy was performed in 5 patients (26.3%) and showed improvement of split renal function compared to preoperative study.

Conclusions: The results of this study suggest that retrograde Holmium laser endoureterotomy is an effective and safe treatment option for postoperative ureteral strictures following endoscopic stone surgery. However, a limitation of the study is the short follow-up period.