

### PP43

#### Endoscopic treatment of impacted and non-impacted ureter stones: outcome and complications

K. Hauner, F. Kurtz, S. Schwab, J. Gschwend, M. Straub

Department of Urology, Rechts der Isar Medical Center, Munich, Germany

**Introduction and Objectives:** According to the EAU-guidelines ureterorenoscopic laserlithotripsy is a valid treatment option for ureter stones. Aim of the present study was to evaluate the stone clearance and the short- and long-term complication rate for impacted and non-impacted ureteral stones especially regarding ureteral stricture and kidney function.

**Material and Methods:** From January 2007 to July 2009 364 patients with stones were treated with ureterorenoscopy. 55 patients fulfilled the criteria for our retrospective assessment. 32 of them had impacted stone situation with severe inflammation of the ureteral mucosa and 23 had non-impacted stones  $\geq 5$  mm. For endoscopic in situ lithotripsy a holmium-YAG laser was used. The intervention ended routinely with ureteral stenting. After a mean period of 22.5 months all patients had a follow-up examination including ultrasound of the kidneys, urine analysis and blood chemistry.

**Results:** A total of 79 calculi were included in the assessment. In 17 cases simultaneous stones were found in renal calices. 31 of the 62 ureter stones were located in the proximal and 31 in the distal ureter. The average size of the ureter stones was 7.5 mm, the mean operation time was calculated 59.1 minutes for impacted and 40.6 minutes for non-impacted stones. Primary stone-free rate was 85% for impacted and 96% for non-impacted stones. Complications were observed in 13% including fever, ureteral perforation, bleeding, prolonged haematuria, lesion of the ureteral mucosa and urethral stricture. In non-impacted stones only 4% had minor complications. For impacted stones complications were observed in 19%. Fortunately, the follow-up examination revealed no patient with ureteral stricture or pathologic changes in renal function after the operation.

**Conclusions:** Ureterorenoscopic laserlithotripsy in impacted ureter stones is safe and efficient. Primary stone-free rate in impacted ureter stones was 85%! Despite a higher risk for intra-operative complications no long-term complications were observed.