

Endourology 2009; 23(Suppl 1): A83.

The Accordion device for limiting ureteral retrograde stone migration: Initial Brazilian experience.

Al Mitre, C Gromatzky, G Ebaid, F Dénes, CJ Pagotto, V Pagotto

Background: Retrograde migration of calculi remains a challenge during rigid ureteroscopic lithotripsy. This study was to assess the initial clinical experience in Brazil using the Accordion device to limit stone migration during ureteroscopic stone fragmentation.

Methods: Ten consecutive cases of ureteral calculi were treated with rigid ureteroscopy using either a ballistic lithotripter or holmium laser, with an Accordion device (PercSys) engaged proximal to the stone. Data was collected on stone size, hardness based on UH on CT, and migration of the stone during fragmentation.

Results: In all ten patients, the Accordion device passed the stones successfully. The device was visible clearly under fluoroscopic imaging. A total of 12 stones were treated, ranging in size from 6 to 12 mm. In one case, the device was removed prior to starting lithotripsy due to space limitations in a narrow ureter once the ureteroscope was inserted. Of the remaining 9 cases, no fragments migrated beyond the film occlusion in 7 patients, but in two laser cases small fragments (< 2mm) migrated past the occlusion due to highly dilated ureters. These fragments were eliminated spontaneously and required no further action. In one patient with multiple stones, two ureteral stones were treated without subsequent migration but a third stone at the ureteropelvic junction migrated to an inferior calyx; this stone was not considered for use with the Accordion device.

Conclusion: The Accordion device effectively occluded the ureter preventing retrograde migration of clinically-relevant calculi or fragments during ureteroscopic pneumatic ballistic or laser lithotripsy.

90-1043- 01 rA