

## **THE ACCORDION: A NEW DEVICE TO PREVENT STONE MIGRATION DURING URETEROSCOPIC LITHOTRIPSY**

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**Introduction:** Stone migration and retropulsion can complicate ureteroscopic lithotripsy, resulting in longer operating times and decreased stone-free rates. Several devices are currently available to prevent such retropulsion. We present a novel device that is a 0.038" guidewire with two filmy flanges that, when deployed, "accordions" to a 7 mm wide device that prevents fragment migration.

**Methods:** The Accordion (PercSys, Mountain View, CA), was employed in 6 patients with proximal or distal ureteral stones undergoing flexible or semi-rigid ureteroscopic laser lithotripsy. The Accordion was inserted either through the ureteroscope, through a ureteral access sheath or via a cystoscope and guided using fluoroscopy. The holmium:YAG laser was utilized for intracorporeal lithotripsy.

**Results:** The Accordion was successfully placed in all patients proximal to the stone and laser lithotripsy was successfully carried out. No fragments migrated beyond the Accordion. The Accordion was used to pull and sweep the fragments out of the ureter or access sheath. In cases where the fragment was too large to be removed, the Accordion simply undeployed itself and was easily removed. In one case where a pre-stented patient had his stent migrate into the distal ureter, the Accordion was used to remove it from the ureter. All patients were stone-free postoperatively. A post-operative ureteral stent was not necessary in any of the cases.

**Conclusions:** The Accordion is easily inserted, deployed and successfully prevented stone migration. It can also be used to sweep fragments out of the ureter during ureteroscopic lithotripsy.

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