LIMITING STONE RETROPULSION DURING LASER LITHOTRIPSY WITH A NOVEL URETERAL OCCLUDING DEVICE

Joseph V. Ditrolio, Rahuldev Bhalla Roseland Surgical Center, Roseland, NJ

Introduction: Retrograde migration is a common occurrence during rigid ureteroscopy and laser lithotripsy. We present the initial use of the PercSys Accordion device to limit retropulsion.

Methods: A 56 y/o female presented with a 1 cm proximal right ureteral stone and mild hydronephrosis. She underwent a rigid ureteroscopy and laser lithotripsy following the placement of the Accordion device (PercSys Inc.) proximal to the stone. After proper positioning of the device under fluoroscopy, its film occlusion is formed within the ureteral lumen. Laser lithotripsy was performed in the standard fashion. At the end of the case the small fragments were swept out into the bladder.

Results: Retropulsion of the targeted stone and subsequent fragments did not occur with the use of the film occlusion. All stone fragments were kept in the field of view and none were seen to migrate into the kidney. In addition, the film occlusion caused a rebounding of the fluid and flushed the stone fragments distally and allowed for a clear view. The small fragments were swept into the bladder at the end of the case, thus eliminating tedious and time-consuming serial basketing of individual fragments.

Conclusions: The Accordion occluding device limited stone retropulsion but more importantly provided a means to keep the field of vision clear during lithotripsy. This may translate into a shorter case and possibly reduce the stone burden and repeat trips to the operating room.