

STONES

Active retrieval of stone fragments improves outcomes

Complete intraoperative removal of stone fragments after holmium laser lithotripsy reduces the incidence of subsequent unplanned medical visits, say Oscar Schatloff and colleagues from Tel Aviv University, Israel. Active retrieval might also offer further benefits to patients by decreasing the frequency of rehospitalization, residual stones and ancillary procedures after lithotripsy.

“When I started doing ureteroscopic stone surgery during my fellowship training, I was told to just break the stones into sufficiently small fragments, and not to make too much effort to take them out,” explains Schatloff. “From time to time, however, I saw patients in the clinic and on the hospital wards who had acute pain events due to retained fragments. As the literature did not give us convincing answers, we decided to address this issue ourselves.”

Schatloff’s team randomized a total of 60 adult patients with single or multiple ureteral stones to receive either active or passive management of their stone fragments after semirigid ureteroscopic fragmentation. In the active retrieval

group, the stone was targeted in the center, and broken into successive half sizes; fragments were retrieved and deposited inside the bladder using a ureteroscopic grasper. In the passive management group, the stone was targeted until no fragments greater than 2 mm in size remained; no extraction of fragments was carried out. The primary end point was any unplanned medical or emergency room visit within 30 days of surgery.

The investigators found that patients in whom fragments were left to pass spontaneously had a significantly higher rate of unplanned visits. In fact, only 1 patient (3%) in the active removal group had an unplanned medical or emergency room visit, compared with 9 patients (30%) in the passive management group. In addition, the researchers suggest that rates of rehospitalization and ancillary procedures might be higher, and the 30-day stone-free rate might be lower, in the passive management group compared with the active retrieval group. However, the small sample size and the low number of events limited their assessment of these secondary end points.



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“The implication of this research is that we should not feel confident in leaving all fragments to pass spontaneously,” says Schatloff. “Instead, a combined approach that removes most of the stone bulk and leaves just the dust and very small fragments behind seems appropriate, according to my experience.”

Nick Groves-Kirkby

Original article Schatloff, O. *et al.* Randomized trial of stone fragment active retrieval versus spontaneous passage during holmium laser lithotripsy for ureteral stones. *J. Urol.* **183**, 1031–1036 (2010)