

Re: Flexible ureteroscopic laser lithotripsy for upper urinary tract stone disease in patients with spinal cord injury

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We thank the authors for this important study examining the outcomes of flexible ureteroscopic laser lithotripsy (URS) for upper urinary tract stone disease in patients with spinal cord injury (SCI) [1]. With the rising implementation of URS, assessment and outcome of SCI patients play an important role in the management of urolithiasis. Previous studies report that this patient group has an increased risk of urolithiasis compared to the general population [1–3].

Given these factors, this study was undertaken to determine whether URS is an effective treatment choice for SCI patients. In accordance with this finding, surgeons can follow this modality of intervention in this group of patients.

All surgeons face many challenges such as SCI in stone patients. This population has a higher risk of stone formation and also a higher risk of mortality and morbidity. Therefore, URS must be carefully discussed with patients and their families. Additionally, this study demonstrates that SCI patients have an increased risk of complications.

Despite this study's very remarkable results, it has some limitations: it is a retrospective study and the sample size is quite limited, so it may be under-powered; it lacks a comparison group of other treatment modalities [percutaneous nephrolithotomy (PNL) and extracorporeal shock wave lithotripsy (ESWL)] and operation times. It is unclear why the patients did not undergo CT scan post-operatively. The VUR rate is

unclear, despite the high rate of VUR in this patient population. Also, the time gap between injury and stone disease is unclear. The other important individual factors affecting the outcome of URS in SCI patients are presence of urinary tract infection (UTI) related to neurogenic bladder dysfunction, difficulties in patient positioning and anesthetic risks due to decreased pulmonary capacity [1, 3].

Patients with SCI are prone to developing simultaneous renal and bladder calculi. The presence of vesico-ureteral reflux has been shown to be closely associated with renal lithiasis in these patients [2]. Also, the clinical presentation of stone disease in patients with SCI tends to involve frequent UTIs or urosepsis and at the time of presentation, patients may need emergency renal drainage. Stone disease carries a mortality rate that may be significant, especially compared with the general population, although only a few small case series have been published.

There is little information reported on metabolic management of these patients or on preventative strategies that can be used after the initial stone episode. Ureteroscopy is a common modality used in the general population to manage upper tract stone disease. Traditional limitations of this procedure in patients with SCI have likely been overcome with new flexible scopes; however, the medical literature has not specifically reported on its use among patients with SCI.

In conclusion, surgical procedures like URS have a higher risk in SCI patients and surgeons should be aware of the risks of the procedure in this unique group. To overcome or minimize the complications, patients should be assessed systematically and meticulously. All measures should be taken to prevent UTI and urosepsis following the procedure.

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Compliance with ethical standards

Conflict of interest None.

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