

**Re: Kaczmarek K, Jankowska M, Kalembkiewicz J, et al. Assessment of the incidence and risk factors of postoperative urosepsis in patients undergoing ureteroscopic lithotripsy. Cent European J Urol. 2024; 77: 122-128**

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Dear Editor,  
we have read the study “Assessment of the incidence and risk factors of postoperative urosepsis in patients undergoing ureteroscopic lithotripsy” with great interest [1]. The authors examined data from 231 patients who underwent ureteroscopic lithotripsy (URSL), revealing that 16.8% had a confirmed positive urine culture prior to the procedure, and the incidence of urosepsis within 30 days was 4.7%. They also reported that a preoperative positive urine culture significantly correlated with the risk of urosepsis. Preoperative hydronephrosis (HN) was observed in 22.9% of the cases, and only 9.4% of the cases had preoperative DJ or percutaneous nephrostomy (PCN). In patients with impacted stones and significant HN (grade 2 and above), urine culture obtained through the urethral route may not accurately indicate infection in the obstructed kidney; it is more likely to reflect the status of the contralateral kidney. In such instances, conducting a thin PCN and acquiring a urine culture from this catheter to inform a subsequent strategy may represent a more precise approach. Furthermore, the presence of a PCN during the surgery will markedly decrease intrarenal pressure (IRP), thereby mitigating the risk of urosepsis during the procedure. In a current porcine renal model, pyelovenous backflow was observed at IRPs of 90 mmHg or greater, while pyelotubular backflow occurred at irrigation IRPs of 60 mmHg or greater [2]. Nephrostomy drainage is the most effective technique for reducing IRPs. An interesting clinical study assessed the effi-

cacy of PCN and the antegrade irrigation method from PCN during URSL and indicated that this approach resulted in higher stone-free rates and reduced operative time compared to conventional URSL, without an increased risk of urinary tract infections [3]. We usually conduct preoperative nephrostomy for patients with obstructed ureteral or renal pelvic stones and significant HN in preparation for URSL or retrograde intrarenal surgery (RIRS) and also evaluate the preoperative nephrostomy culture. This approach not only offers a more precise antimicrobial strategy and maintains low IRPs during the surgery but also facilitates continuous fluid circulation during the procedure, thereby enhancing the clarity of the screen image.

In conclusion, for patients with substantial HN and obstructive ureteral or pelvic stones, the insertion of a nephrostomy prior to surgery while maintaining the nephrostomy during the procedure may greatly reduce the risk of urosepsis in both URSL and RIRS. If the preoperative nephrostomy rate in the presented study had been higher, the urosepsis rate might have been lower.

**CONFLICTS OF INTEREST**

The authors declare no conflict of interest.

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**ETHICS APPROVAL STATEMENT**

The ethical approval was not required.

## References

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1. Kaczmarek K, Jankowska M, Kalembkiewicz J, et al. Assessment of the incidence and risk factors of postoperative urosepsis in patients undergoing ureteroscopic lithotripsy. *Cent European J Urol.* 2024; 77: 122-128.
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