SIRS following percutaneous nephrolithotomy is unpreventable by intensive therapeutic antibiotics in patients with positive urine culture: too soon to conclude

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Received: 30 May 2020 / Accepted: 27 July 2020 / Published online: 5 August 2020
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Dear Editor

Infection is the most dangerous complication following percutaneous nephrolithotomy (PCNL). Positive urine culture is a major independent risk factor for post-PCNL urosepsis, requiring adequate preoperative antibiotic therapy [1]. With great interest, we read the article by Liu et al. published in the journal of Urolithiasis [2], which is really interesting. However, some matters are worthy considering behind their results.

First, this study reported the risk of positive urine culture for SIRS was significantly higher than that of negative urine culture even after intensive therapeutic antibiotics to turn the reexamined urine culture negative. It can only conclude that the risk of SIRS derived from positive urine culture was not able to be completely preventable, instead of unpreventable. The conclusion could be drawn only if the risk for SIRS was comparable in patients with positive urine culture treated by single-dose antibiotic prophylaxis and long-term antibiotics therapy more than 7 days.

Second, this study did not describe the inclusive and exclusive criteria of the participants. Although the positive urine culture becomes negative after intensive antibiotics treatment, the patients with urine drainage [1], immunosuppressive agents, or immunodeficiency, are still at a higher risk for SIRS. Those confounding factors should have been excluded or stratified before analysis.

Third, stone culture should be taken into the analysis. Patients with positive urine culture are more likely to

co-exist with positive stone culture, and most bacteria in stone are multi-drug resistant and hard to treat [3]. Therefore, even the bacteria in urine were cured, the bacteria released from stones during PCNL can still cause SIRS.

Lastly, longer postoperative hospitalization should not have been analyzed as a risk factor of SIRS, which could be a consequence of the postoperative SIRS.

This paper has its value to remind the higher risk of SIRS in patients with positive urine culture. However, high-quality large-sampled studies are still needed to prove the effect of antibiotics on urosepsis following PCNL in patients with a positive urine culture.

Compliance with ethical standards

Conflict of interest The authors declare no conflict of interest.

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