

Micropercutaneous versus Retrograde Intrarenal Surgery for the Management of Moderately Sized Kidney Stones: A Systematic Review and Meta-Analysis

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Dear Editor,

We read an article published by Zhang et al. [1] in the April 2020 edition of *Urologia Internationalis*. This study is a systematic review and meta-analysis comparing micropercutaneous nephrolithotomy (mPNL) versus retrograde intrarenal surgery for moderately sized renal stones. With this study, the authors have concluded that “mPNL is associated with fewer double-j stent insertions and higher stone free rates at the expense of greater drop in hemoglobin and longer hospital stay.” We would like to congratulate the study authors for the same. While going through the article, we have noted certain methodological deficiencies that we would like to highlight with this article.

1. Search strategy provided by authors is discrete and lacks proper adherence to patient/population, intervention, control, outcome (PICO) guidelines [2, 3]. Preferred reporting of systematic reviews and meta-analysis (PRISMA) guidelines also recommend providing search strategy used for any of the electronic database as supplementary file, which is also missing in this article [4]. PRISMA guidelines also recommend prospective registration of study protocol to PROSPERO which is lacking in this study and has not been addressed in limitations section [4].
2. For quality assessment of randomized studies, Cochrane guidelines recommend using Cochrane risk of

bias assessment tool for randomized controlled trials. This tool examines a study across 7 domains (sequence generation, allocation concealment, blinding of participants and personnel, blinding of outcome assessment, incomplete outcome data, selective outcome reports, and other source of bias) and graded as “high risk of bias,” “low risk of bias,” or “unclear risk of bias” across these domains. The method used by author in this study is not clear [5].

3. From the Forest plots provided by the authors in Figures 2e and 3e regarding hemoglobin drop, we noted data for the study by Kandemir et al. [6]. has been wrongly entered. We would kindly request the authors to correct the mistake and redraw the Forest plots, as the wrongly entered data can change the final results significantly.
4. Authors should also have compared the need for blood transfusion in the 2 groups as it is a much more clinically relevant parameter than few decimals of significantly different hemoglobin drop not requiring transfusion in the 2 groups.

Conflict of Interest Statement

The authors have no conflicts of interest to disclose.

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Author Contributions

G. Sharma: Protocol development, data collection and management, data analysis, and manuscript writing. S. Tyagi: Protocol development, data collection and management, data analysis, and manuscript writing

References

- 1 Zhang B, Hu Y, Gao J, Zhuo D. Micropercutaneous versus retrograde intrarenal surgery for the management of moderately sized kidney stones: a systematic review and meta-analysis. *Urol Int*. 2020;104(1-2):94-105.
- 2 Sharma G, Sharma AP, Mavuduru RS. Safety and efficacy of bipolar versus monopolar transurethral resection of bladder tumor: a systematic review and meta-analysis. *World J Urol*. 2020.
- 3 Sharma G, Sharma AP, Mavuduru RS, Devana SK, Bora GS, Singh SK, et al. Role of phosphodiesterase inhibitors in stent-related symptoms: a systematic review and meta-analysis. *World J Urol*. 2020;38(4):929-38.
- 4 Moher D, Liberati A, Tetzlaff J, Altman DG, Group P. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *Int J Surg*. 2009;8(5):336.
- 5 Higgins JP, Altman DG, Gøtzsche PC, Jüni P, Moher D, Oxman AD, et al. The Cochrane Collaboration's tool for assessing risk of bias in randomised trials. *BMJ*. 2011;343:d5928.
- 6 Kandemir A, Guven S, Balasar M, Sonmez MG, Taskapu H, Gurbuz R. A prospective randomized comparison of micropercutaneous nephrolithotomy (Microperc) and retrograde intrarenal surgery (RIRS) for the management of lower pole kidney stones. *World J Urol*. 2017;35(11):1771-76.