Letter to the Editor

The necessity of exercise intervention nursing before total knee arthroplasty is debatable

Yanping Xiao, Xing Zhou

Department of Spine Surgery, Ganzhou People's Hospital, Ganzhou, China

Correspondence to: Xing Zhou, MM. Department of Spine Surgery, Ganzhou People's Hospital, Ganzhou 341000, China.

Email: mgoodman28@126.com.

Comment on: Wang D, Wu T, Li Y, *et al.* A systematic review and meta-analysis of the effect of preoperative exercise intervention on rehabilitation after total knee arthroplasty. Ann Palliat Med 2021;10:10986-96.

Submitted Mar 03, 2022. Accepted for publication Apr 29, 2022.

doi: 10.21037/apm-22-288

View this article at: https://dx.doi.org/10.21037/apm-22-288

With great interest, we read the article entitled "*A systematic review and meta-analysis of the effect of preoperative exercise intervention on rehabilitation after total knee arthroplasty*" by Wang *et al.* (1). In this well-designed study, the authors conducted a systematic review and meta-analysis and concluded that "*preoperative exercise intervention prior to total knee arthroplasty can improve knee flexion and flexibility, reduce inflammatory pain and stiffness, improve muscle strength, and improve joint function, thereby improving the quality of life of patients*". While the conclusions are of great importance, we would like to highlight some issues regarding study registration, search strategies, and data analysis that we believe should be considered when interpreting these findings.

In the Methods section, the authors did not provide study registry information. Registered studies can be effective in increasing transparency and avoiding potential bias. Therefore, an updated and unbiased review of the effectiveness of preoperative rehabilitation exercises on postoperative outcomes of total knee arthroplasty is warranted.

Regarding the search strategy in the text, there are three shortcomings that need to be pointed out: first, the author declared that only English articles were included, however, the English databases searched are limited, and other important databases such as CENTRAL, OpenGrey, ANZCTR and CINAHL should also be searched to maximize the inclusion of all available literature; second, the combination of search keywords provided in the text is too single, and different search combinations should be provided in each database, and the corresponding search details should be placed in the supplementary files of the text; third, we searched for eligible studies using our own search strategy and were surprised that some of the eligible studies were not included in the meta-analysis (2-5), thus we have a hard time believing the authors' conclusions are correct.

Finally, we cannot find the quality level of the pooling outcomes in the text. It is necessary to realize that meta-analysis is an important reference in clinical decision-making, and it is particularly important to conduct a careful and accurate analysis of the existing data and to evaluate the quality level of the outcomes. In addition, the authors noted that the follow-up time for the outcomes ranged from 6–12 weeks, thus subgroup analyses based on follow-up or intervention time might make the conclusions more convincing.

Overall, Wang *et al.* (1) analyzed a valuable issue, however, the outcomes of this meta-analysis should be interpreted with caution due to the limitations described above.

Acknowledgments

Funding: None.

Footnote

Provenance and Peer Review: This article was a standard submission to the journal. The article did not undergo

external peer review.

Conflicts of Interest: Both authors have completed the ICMJE uniform disclosure form (available at https://apm.amegroups.com/article/view/10.21037/apm-22-288/coif). The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Cite this article as: Xiao Y, Zhou X. The necessity of exercise intervention nursing before total knee arthroplasty is debatable. Ann Palliat Med 2022;11(6):2175-2176. doi: 10.21037/apm-22-288

References

1. Wang D, Wu T, Li Y, et al. A systematic review and meta-analysis of the effect of preoperative exercise intervention on rehabilitation after total knee arthroplasty. Ann Palliat Med 2021;10:10986-96.
2. Topp R, Swank AM, Quesada PM, et al. The effect of prehabilitation exercise on strength and functioning after total knee arthroplasty. PM R 2009;1:729-35.
3. Gstoettner M, Raschner C, Dirnberger E, et al. Preoperative proprioceptive training in patients with total knee arthroplasty. Knee 2011;18:265-70.
4. Huang SW, Chen PH, Chou YH. Effects of a preoperative simplified home rehabilitation education program on length of stay of total knee arthroplasty patients. Orthop Traumatol Surg Res 2012;98:259-64.
5. Williamson L, Wyatt MR, Yein K, et al. Severe knee osteoarthritis: a randomized controlled trial of acupuncture, physiotherapy (supervised exercise) and standard management for patients awaiting knee replacement. Rheumatology (Oxford) 2007;46:1445-9.

