LETTER TO THE EDITOR

A Novel Mini External Fixation Technique versus Percutaneous Pinning in the Treatment of Phalanx Fracture in Hand

Dear Editor

We read with great interest the article titled, "A Novel Mini External Fixation Technique versus Percutaneous Pinning in the Treatment of Phalanx Fracture in Hand" by Ahangar *et al.*.[1] The authors demonstrate encouraging short-term outcomes with their innovative mini external fixator, highlighting improved range of motion and expedited return to work. We commend their efforts to optimize fixation strategies for unstable and complex phalangeal fractures, and we offer the following commentary.

First, the study's follow-up period appears too short to capture late complications.

Phalangeal fractures, especially those involving joints, can have sequelae that may not manifest until many years later. For example, O'Rourke *et al.*[2] followed intra-articular phalangeal fractures for 11 years and found that 17% of injured finger joints developed radiographic osteophytes or cysts by final follow-up. Notably, improvement in pain and range of motion often continued for more than 1 year post-injury in that series, indicating that short-term evaluations may underestimate eventual recovery. Similarly, a 12-year study of mallet finger injuries (distal phalanx fractures) noted new osteoarthritic changes in 41–44% of cases compared to the contralateral side.[3] In the absence of long-term radiographic and functional data, late degeneration of the injured digit's joints or persistent motion deficits could not be detected in this study.

Second, the report on the "time to return to work" outcome indicator did not stratify by the physical demands of the patients' occupations. This is problematic because the ability to resume work after a hand fracture largely depends on the nature of the individual's job. A manual laborer or tradesperson may require a longer recovery to regain strength and dexterity than an office worker would, even with the same clinical healing. Consequently, the reported average "return to work" time is difficult to interpret and could be biased by the occupations of the patients.[4] Furthermore, a systematic review by Shi et al. found that lower pre-injury income (a surrogate for labor-intensive occupations in many cases) was consistently associated with delayed return to work after traumatic hand injury.[5] By pooling all patients together, the article's "time to return to work" outcome may obscure important differences in recovery between a construction worker and an office employee. We suggest that future studies stratify or adjust return-to-work outcomes by job type or physical workload for more clinically meaningful comparisons.

In summary, although the novel mini external fixation technique for phalangeal fractures is an intriguing advancement, the reported study has methodological limitations that temper the strength of its conclusions. Longer follow-up is needed to ensure that initial gains are not offset by late complications like arthritis or stiffness. Return-to-work outcomes should be interpreted in the context of patients' job demands. Addressing these issues in future research will improve the rigor of comparative studies and provide more robust evidence to guide clinical practice. We appreciate the opportunity to raise these points and hope they will stimulate further high-quality investigations into hand fracture management techniques.

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THE ONLINE VERSION OF THIS ARTICLE
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Acknowledgement

N/A

Authors Contribution: Kang QIN wrote the paper. Yichen XU and Weiqiang LIANG revised the manuscript.

Declaration of Conflict of Interest: The authors do NOT have any potential conflicts of interest for this manuscript.

Declaration of Funding: This research was financially supported by the National Natural Science Foundation of China (Grant No.: 82202419), the Natural Science Foundation of Shandong Province, China (Grant Nos.: ZR2022QH174, ZR2022MH299, and ZR2021MH166), and the Young Elite Sponsorship Program of Shandong Provincial Medical Association, China (Grant No.: 2023_LC_0139).

Declaration of Ethical Approval for Study: Authors received NO financial support for the preparation, research, authorship, and publication of this manuscript.

Declaration of Informed Consent: There is no information (names, initials, hospital identification numbers, or photographs) in the submitted manuscript that can be used to identify patients.

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