Safe corridors for K-wiring in phalangeal fractures

Sir,

We read with great interest the study entitled, “Safe corridors for K-wiring in phalangeal fractures” in Indian Journal of Orthopaedics. This study relates to a very common procedure performed in the practice of Orthopedics. We congratulate the authors for the wonderful effort that they have put in for this study.

However, we have a few concerns which I would like to share.

- It is mentioned that the authors had performed a pilot cadaveric study, in which multiple K-wires were passed in the phalanges under direct visualization of the extensor expansion and mapping of the safe portals during that process. No details of this pilot study have been given. It becomes relevant as the pilot cadaveric study was the basis on which this clinical study was based. It has also been mentioned that in the pilot study, manual pulling of the flexor and extensor tendons was performed for full extension and flexion of fingers. The clinical photograph attached shows K-wires in a dry cadaver, how were the authors able to test the full range of movement in a dry cadaver?

- The authors have not given any specific angle of the safe zone. The safe zones have been described only in relation to the central tendon, the relationship with the vessels and nerves have not been mentioned.

- The safe zones highlighted in Figure 2 of their article do not match the text. The text mentions a small triangular safe corridor at the base of middle phalanx during flexion of the proximal interphalangeal joint, dorsomedially and dorsolaterally, between the central slip and the lateral head. This area is not depicted as safe in the figure.

- In material and methods, there is no mention of the duration of study, absolute indications of closed reduction and percutaneous K-wire fixation, inclusion criterion for this study, how the authors excluded intraarticular component in the base and neck fractures of the phalynx, the postoperative immobilization protocol, how did the surgeon confirm “perfect reduction” in base of proximal phalynx and the “parallel” K-wires which he has referred to, in Figure 4 B1 appear to be converging.

- The author has labeled the normal Total Active Motion (TAM) as 260°. Bain et al.2 mention TAM as 307°.

- The author has graded results as good, excellent, fair and poor according to the percentage of the recovery as compared to the normal TAM of 260°. In the results, the author says that the average TAM in the present study was 270°, how can the average TAM in the study be more than the normal range mentioned.

- Table 1 of their article shows that there were 4 cases of fracture of the head of phalanx. How were they included in the study when intraarticular fractures have been kept in exclusion criteria?

- Figure 6 of their article shows a fracture of base of proximal phalanx being fixed by a K-wire passing through the proximal and distal interphalangeal joints. In how many cases was this required and was the result in these patients same as those in which extra-articular K-wires were used?

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Conflicts of interest
There are no conflicts of interest.

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