

## Reviewer Responses

### Reviewer 1:

This paper discusses the anatomical structure of EIP at the extensor retinaculum and proposes a new technique of tendon transfer from EIP to EPL, which provides a new surgical method for reconstructing the function of the extensor pollicis longus. The work of this paper is practical and logical. I have several minor comments on this study that the authors should address before publication:

1. In lines 42 and 200, MCP, MP、 IP, for abbreviations appearing for the first time, please add the full English name. [Thank you, we have made this change.](#)
2. In line 69, “Multiple studies have noted that anatomic variants are frequent (10%) 4 with regards to arrangement and number of slips.” Why is only one reference cited? The author should add the appropriate reference. [Thank you, we have added the appropriate references.](#)
3. In line 78, the relative relationship between EIP and EDCI at MCP is suddenly followed by the similar thickness of the two. What is the purpose? and is it clinically significant that the thicknesses are similar? I suggest the author add a few transitional sentences for a brief explanation. [Thank you, we have made this change.](#)
4. In line 85, “EIP to EPL transfer is one of the most common tendon transfers in the upper extremity.” It is suggested to supplement the reasons why extensor indicis proprius tendon transposition is widely used in clinics to reconstruct the function of extensor pollicis longus, to facilitate readers' understanding. For example, the similarities in anatomy, biomechanics, and innervation, or the advantages of easy-to-obtain materials. [Thank you, we have made this change.](#)
5. In line 178, “Proposed surgical technique”, please specify how you adjusted the surgical incision based on the identified tendon anatomy and what are the advantages and disadvantages of the tendon transfer technique you provided versus the current conventional surgery? [Thank you, we have made this change.](#)
6. In line 300, “table1”, specimens have sex differences, whether to group analysis according to gender, and does sex contribute to tendon differences? If so, this should be indicated in the text. [Thank you, we did not find significant differences in tendon circumference between specimens of different sex, but overall the tendon circumferences were lower for females as compared to male specimens. In addition, the difference between the distal extensor retinaculum to myotendinous junction was lower in female specimens compared to males. We have added this into the text as well under table 2.](#)

### Reviewer 2:

I would firstly like to compliment the Authors for their effort in writing this interesting article. After having gone through the paper with great attention and interest, I regret to inform the Authors that I have made recommendations against publication of the paper on this Journal, with

the possibility to carry out major revision before resubmission. I truly believe weaknesses outweigh the strengths. The article is overall well written (evidently by native English speakers) and structured. The topics are interesting and relevant. Statistics are well performed. The introduction is informative and well built. Referencing is appropriate. The supplemental material is relevant and appropriate.

The article reads more like a combination of 2-3 different articles. There are parts related to the introduction of a new surgical technique (but only little space is given to this, authors only described the technique itself, but it is not integrated at all within the rest of the paper, no further clinical implications are given), other parts discuss anatomical aspects of the studied tendons (again without significant clinical implication), etc. Thank you, we actually share our preferred technique given the findings in this article, not so much a new surgical technique but have clarified how we changed our technique from a longitudinal to a transverse incision at the distal extensor retinaculum in lines 190-193 and 203-207 given the reliable findings of the EIP being ulnar to EDCI at the distal extensor retinaculum as well as at the metacarpophalangeal joint. We included further explanation of the clinical relevance in this revision.

Discussion and conclusions reflect the above issue, with information that might be relevant and important in their field, but they lose relevance because of the way they are reported. The abstract does not entirely reflect what it is described in the paper and needs major revision. In summary, I would restructure the paper from scratch, or even divide the paper in two different articles, one proposing the surgical technique (about which many more information are missing...and in this case the article would need obviously a related introduction section, methods, etc...new hypotheses proposed? Answered questions?) and one reporting the cadaveric anatomical findings (and again, why would this be relevant? Clinical implications? Anything new compared to previous studies and knowledge?). The title must be revised accordingly. A more scientific angle is necessary. Most of limitations are not described. Learning points? Thank you we have changed the wording of the abstract to better reflect the aims of this paper. Please note the limitations section starting at line 223.