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Letter to the Editor: "Lordosis Restoration With Midline Minimally Invasive Cortical Trajectory Screws (MidLF) and Transforaminal Interbody Fusion: A Safe Technique With a Short Stay"

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Dear Editor,

I read with interest the article by Rocos and Harding[1] in which they presented their radiological, clinical, and patient-reported outcome data at 2-year follow-up for patients who underwent minimally invasive cortical trajectory screws and transforaminal interbody fusion.

The authors outlined the advantages of cortical trajectory screws over conventional pedicle screws, including their biomechanical superiority, which, I believe, can be of some clinical significance in certain clinical situations such as severe osteoporosis. In this study, the author emphasized the adequate lordosis restoration with their technique; however, I have the following concerns:

First, lordosis restoration appears to be due to transforaminal lumbar interbody fusion procedure only. I believe that the Midline minimally invasive cortical trajectory screws and lumbar fusion (MedLF) procedure per se does not have any additional effect on lumbar lordosis. Because the authors performed bilateral facetectomies, the amount of lordosis restoration achieved in their series is well below the potential lordosis restoration achievable with bilateral facetectomies. The authors mentioned that "lordosis across the fused segment increased by a mean of 7.58 (95% CI: 5.08–9.98, P = 0.001) from a mean of 148 (95% CI: 128–178) preoperatively," which is a bit ambiguous as the values give the impression that lordosis decreased postoperatively.

Second, as I deduce from the study title, sagittal profile parameters seem to be primary key points for the study; however, the information provided in the manuscript is quite inadequate. For example, there is no mention of data regarding pelvic incidence-lumbar lordosis mismatch pre- and postoperatively, which the authors also emphasized as a key parameter in the Discussion section.

Third, the clinical outcome provided may not be representative of the actual findings given the fact that only 9 out of 25 patients had visual analog scale and Oswestry Disability Index score data available. Also, I am concerned with the 8% (2 of 25 patients) reoperation rate over 2 years of follow-up in this series. Cited claims of the study, including reduced invasiveness and decreased complication rate, are inadequately supported by the data presented in the manuscript.

I am also surprised at the representative x-ray image of the technique, which has probably been put by mistake as the screws in this x-ray image show conventional pedicle screw trajectory only especially at inferior instrumented vertebra. As mentioned by the authors, cortical trajectory screws follow an inferomedial to superolateral trajectory, which is not the case here.

I appreciate the authors for presenting their experience of this novel technique; however, in light of the aforementioned considerations, readers may wish to carefully consider the findings of Rocos and Harding..

REFERENCES

1. Rocos B, Harding I. Lordosis restoration with midline minimally invasive cortical trajectory screws (midlf) and transforaminal interbody fusion: a safe technique with a short stay. *Int J Spine Surg*. 2021;15(3):436–440. doi:10.14444/8065

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