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Letter to Editor

Author's Reply to "Is It Safe to Evaluate Pedicle Screw Position with Postoperative Tomography"

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Dear Editor,

We thank the authors for their interest and for their comments (2) on our previously published article (1). Ersen et al. have claimed that evaluating postoperative screw positions after surgery with computerized tomography (CT) may not be the safe way of performing this evaluation and have mentioned some other papers regarding usage of navigation systems for reducing radiation exposure.

Image guidance is a valuable technology that everyone in our field accepts but we could not construct the link between image guidance usage and the postoperative evaluation of screws as in their suggestion.

There are various opinions in the literature for usage of navigation for pedicle screw placement however those articles also report malposition rates (not as high as the contemporary technique in most papers) meaning usage of navigation is not a malposition-free technique. And if you want to check accuracy of pedicle screw placement postoperatively, CT is the only method that is reliable.

One of the articles that Ersen et al. have mentioned (3) was also cited in our original paper. This paper is a valuable meta-analysis which has found accuracy of pedicle screw even with

usage of CT-based neuronavigation as 90%. There are other points of this issue that were discussed in our paper.

Usage of neuronavigation reduces intraoperative radiation exposure but this is only true for some old preoperative-imaging-based-neuronavigation systems. New devices require intraoperative CT usage for safe navigation in the spine and unfortunately this results in radiation exposure.

In conclusion, usage of neuronavigation is not a malposition-free technique and does not reduce postoperative radiation exposure while checking the accuracy of screw position in the postoperative period.

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