Gordon F. G. Findlay

Reviewer's comment on "Computer-assisted posterior instrumentation of the cervical and the cervico-thoracic spine" (M. Richter et al.)

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This paper represents a further exploration in the use of CAS in the insertion of instrumentation in the cervical spine. The authors report their clinical findings in 19 patients in whom variable numbers of cervical and upper thoracic pedicle and C1/C2 transarticular screws were inserted by use of CAS supplemented with image intensification. They make two relevant points: firstly, that CAS is of considerable assistance in localising entry points for percutaneous insertion; and, secondly, that the reference clamps currently available need to be redesigned for use in the cervical spine.

The authors present most impressive results regarding their apparent accuracy in correct placement of the screws. However, I do feel that caution is required in the assessment of the value of these results. Unfortunately, the authors chose not to enlist the help of independent assessors for the postoperative scans but used a member of the surgical team who assisted in some of the procedures. The

authors also present only minimal information as to the protocols used in assessing the postoperative scans. No information about the window settings used is given. The CT protocols used to assess the boundary between the titanium screw and its associated artefact are critical to the interpretation of this information [1].

Of greater importance, I feel that it is essential that studies such as this must use personnel who are completely independent of the surgical team performing the procedures. It would have been far better if two independent radiologists had assessed the postoperative scans, thus ensuring minimal bias and allowing the assessment of both inter- and intra-observer error.

This comment refers to the paper which can be found at <http://dx.doi.org/10.1007/s00586-003-0604-1>

G. F. G. Findlay (✉)
The Walton Centre
for Neurology & Neurosurgery,
Lower Lane, Fazakerley,
Liverpool, L9 7LJ, UK
e-mail:
Gordon.Findlay@thewaltoncentre.nhs.uk

Reference

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