Letters to the Editor

Reliability and Safety of Contralateral Oblique View for Interlaminar Epidural Needle Placement: Standardization of the Appropirate Angle

To the Editor:

In this large retrospective review of a clinical case, Derby et al (1) again show that the contralateral oblique (CLO) view is safe and accurate. Loss of resistance cannot be expected before the ventral interlaminar line (VILL) and the needle may be passed with impunity to just before this line. As the interlaminar line is accessed, the loss of resistance should occur immediately or shortly thereafter.

Once the VILL is breached, needle advancement should be done with great care. The safety and acceptability of the CLO view will be greatly enhanced if the loss of resistance occurs at or just after the VILL and the obliquity used is standard.

In their work the authors used a CLO view at 45 ± 2° and found that at this angle the "needle tip depth was easy to judge." We recognize the authors' pioneering work in this regard, but with the benefit of a prospective study analyzing multiple obliquities, we would like to make a comment on what obliquity best serves the operator to get the loss of resistance at or just after the VILL. We have previously shown that when using the anatomically correct obliquity the loss of resistance occurred at the VILL in 14/24 patients (2). The anatomical obliquity is very close to 50° and this may be used as a surrogate for the measured angle approach. On dividing the area between the VILL and the uncovertebral joint into 3 equal zones (1-3, posterior to anterior) it was seen that the loss of resistance occurred at the VILL or within Zone 1 in 22/24 patients at the CLO measured, 20/24 at CLO 50 and 9/24 at CLO 45. The difference between CLO 45 and CLO 50 was statistically significant.

Based upon this, we propose that CLO 45 is a safe angle to use when accessing the cervical and cervicothoracic epidural spaces, however the angle of 50° increases the likelihood of loss of resistance occurring at the VILL without compromising safety, and thus reduces ambiguity as to where the loss of resistance will occur. Based upon the anatomical analysis, a prospective clinical study, and extensive clinical experience at a major academic medical center, we suggest that an angle of 50° be preferentially used for the CLO view.

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References

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2. Gill JS1, Aner M, Nagda JV, Keel JC, Simopoulos TT. Contralateral oblique view is superior to lateral view for interlaminar cervical and cervicothoracic epidural access. *Pain Med* 2015; 16:68-80.