



## An essential rule; Do not proceed without seeing needle depth

### ARTICLE INFO

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#### Dear Editor,

We have read the article “Iatrogenic Cervical Spine Cord Injury After Interlaminar Cervical Epidural Injection” by Chabra et al. [1] with great interest. Significantly, the article mentions the cord injury, which is a catastrophic complication of cervical epidural steroid injections. As the author says, there were certainly predisposing factors, such as anterior cervical discectomy and fusion surgery history, anatomic patterns precluding loss of resistance, repetitive microtrauma of posterior vertebral ligaments, and narrow cervical epidural space, that led to spinal cord injury in this case. It is significant for us, interventional pain practitioners, that the article highlights these factors that may offer important clinical implications in the treatment of chronic cervicgia. Above all these predisposing factors, we get sight of a major inaccuracy in the injection technique. It appears that, during the first needle attempt, the cervical epidural interlaminar injection was advanced only in the anteroposterior view, and the loss of resistance technique was used without taking the contralateral oblique view. Subsequently, after the patient experienced paresthesia, the needle was withdrawn and then reinserted for a second attempt. We believe that the cord injury occurred at this first needle attempt.

This case report illustrates the danger of the classic technique that is still taught, namely to contact the lamina as a measure of the depth, rather than obtaining an early depth view to determine safe needle tip location. The superior lamina margin may not always be accurately visualized and cannot be relied upon, as is demonstrated by this case. In order to avoid cord injury, it is recommended that, after confirming that the needle is in the midline or paramedian line in the AP view, the needle should be advanced under the contralateral oblique view or lateral view as a safety precaution. The needle depth must be observed under a contralateral oblique view [2,3]. After approaching the ligamentum flavum, the loss of resistance technique should be applied [4]. The AP view should be used only for being coaxial; the needle should not be advanced to deeper structures in this view [5]. In our opinion, this sequence should be the primary consideration. Although multiple predisposing factors may cause cord injury, cervical interlaminar epidural procedures should not be proceeded with without observing the needle depth.

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#### Declaration of Competing interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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