Response to Letter: Optimal Angle of Contralateral Oblique View in Cervical Interlaminar Epidural Injection: Safety or Precision?

We are grateful to Dr.Gill and Dr. Simopoulos for their valuable comments on our study (1). Their previous articles on the contralateral oblique view for cervical interlaminar epidural injection were very impressive and gave us very important information to enhance the safety during this procedure (2,3). We always use the contralateral oblique view to identify the depth of needle during the cervical interlaminar epidural injection.

According to Gill J et al (3), 50 degrees was suggested as the most appropriate angle and so our clinic had also used this angle during the procedure. However, we often experienced cases that the loss of resistance occurred at the deeper than ventral interlaminar line (VILL) when using 50 degrees. In such a situation, it would be difficult to consider VILL under 50 degrees as a safety margin. Therefore, we tried to find the method to enhance the safety during the procedure.

We simulated several conditions and studied the relationship between needle positions and fluoroscopic views. Based on these, we established the hypothesis that the ventral laminar margins would have different angles rather than one angle by needle tip position during cervical interlaminar injection to achieve optimal visualization. Prior to the prospective study, we decided to proceed with the retrospective study using MRI to obtain the optimal fluoroscopic angle due to safety issue. As we suggested in our article (1), 50 degrees would be appropriate for the AP zone 2 but 60 degrees would be more appropriate than 50 degrees in AP zone 1.

Dr. Gill gave us the question. "Is increasing obliquity

safe?" Our answer is sometimes "yes", but sometimes "no". In our opinion, it depends on the needle position. In AP zone 1, which is relatively mid-position, the optimal angle can be changed from 50 to 90 degrees. We presented 60 degrees as the "average" value for VILL. Fortunately, the fluoroscopic view under 60 degrees is very similar to that under 50 degrees as you can see in figures presented in our article. However, in AP zone 2 which is relatively lateral area, increasing obliquity might be harmful.

What we would like to suggest in this article is that checking the position of the needle on the AP view might be important before advancing the needle under the contralateral oblique view and the appropriate contralateral oblique angle might vary depending on the needle position. Choosing the proper angle could contribute to increased safety.

We strongly agree that the "real" clinical study would be needed to prove clinical usefulness of our restrospective data. However, we believe that a desire for greater precision will contribute to enhance safety.

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References

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