Response to Comments: Spinal anaesthesia in poliomyelitis patients with scoliotic spine: A case control study

Sir,

We thank the reader for the critical comments on our article[1,2] The reason that we expressed that 'until now there is no case series available' similar to our study in our journal is because the case series reported by Hebl *et al*.[3] is a retrospective study aiming to show the feasibility and safety of providing regional anaesthesia in patients with pre-existing central nervous system disorders. Although 56% of patients in their series had post-poliomyelitis status as pre-existing central nervous system (CNS) disorder, there is no data regarding the number of patients who also had deformity in spinal curvature. In contrast, ours is a prospective study aiming to predict the course of sub-arachnoid block in patients having poliomyelitis as the primary neurological disorder with resultant scoliosis and coming for lower limb corrective surgeries. All 20 scoliosis patients received 2 ml of 0.5% bupivacaine heavy and were compared with 21 'normal' spine patients. Only four patients in their series reported received 0.5% bupivacaine heavy in a similar dose range of 10-15 mg intrathecally.[3]

The readers say that central neuraxial block is

controversial due to difficulties in palpating landmarks, high risk of dural puncture and unpredictable extent of block. However, study by Hebl *et al.* have concluded that the risks commonly associated with neuraxial anaesthesia and analgesia in patients with pre-existing CNS disorders may not be as frequent as once thought and that neuraxial blockade should not be considered an absolute contraindication in this patient population.[3] We have only mentioned that historically the use of regional anaesthesia technique is relatively contraindicated in this patient population for the fear of worsening neurological outcome.

The third comment that the high disparity in sensory block seen among scoliotic patients was due to curve in spinal canal with an unequal ascent of block. However is difficult to predict on which side higher block is obtained, the convex side or concave side. If this can be predicted, it would be quite helpful to position the patient as per requirement of block height.

The primary objective of the study was to compare the disparity in spread of local anaesthetics in patients with normal and scoliotic spine. We do agree as mentioned in the limitations that reporting the level of block on either side of scoliotic spine would have been informative. In general we have observed high level of block on same side of the curve i.e. on the convexity of the scoliotic curve. The fourth comment was on the use of midline approach and on the success rate achieved 'without mentioning the degree of difficulty' in achieving spinal punctures. The midline in our study refers to the expected midline of the spine and not the midline of the back. However in the 20 patients we studied we were able to negotiate spinal needle into intrathecal space by a midline approach in 1-3 attempts, but we haven't presented the data in the article because the ease of puncture with midline approach was not the primary focus of our study.

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