

Correspondence

Dear Editor,

We write with reference to the article on Paediatric Spinal Anaesthesia by Troncin & Dadure.¹

The article is well written and gives practical advice regarding, in particular, the anatomical considerations in spinal anaesthesia in children, and references our article of ultrasound measurements of spinal canal depth from 105 neonates aged 24 - 42 weeks gestation.²

Our article devised the formula of “Mid-spinal canal depth (mm) = 2 x weight (kg) + 7mm” as a reasonable estimation for lumbar puncture needle depth insertion, which could be used in clinical practice. Unfortunately, Troncin’s article misquotes our advice in two respects.

First, Troncin uses this formula to describe the distance from skin to the subarachnoid space, not the distance from skin to mid-spinal canal depth. Our measurements demonstrate that the neonatal subarachnoid space varies in depth, with average spinal canal depth of around 6.7mm.² This means that the true formula for calculating skin to “nearest” subarachnoid space depth would be 2 x weight (kg) + 3.4mm, and skin to “furthest” subarachnoid space depth would be 2 x weight (kg) + 10mm. We were careful to give a formula for estimating mid-spinal canal depth for lumbar puncture; we presume that the same index is required for spinal anaesthesia?

The second is a typographical slip in the units of measurement, in that Troncin quote measuring “Distance from skin to subarachnoid space (centimetres)” where this is clearly in millimetres. Immediately prior to this, the authors correctly reference an alternative guide using height as an estimator of lumbar puncture depth: Mean depth of insertion (cm) = 0.03 x height of child (cm)³ which may have lead to this error being carried forward.

We are anxious to ensure that your readers are aware of these possible sources of error in the manuscript, to encourage safest clinical practice!

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REFERENCES

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3. Craig F, Stroobant J, Winrow A, Davies H. Depth of insertion of a lumbar puncture needle. *Arch Dis Child* 1997; **77**: 45.

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