



# Caliber of lumbar puncture needle in preterm infants: few concerns

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While applauding the authors' team for this interesting research [1], we would like to draw their attention towards the following issues.

1. The naming of study design is little bit puzzling: It is mentioned as prospective observational study. However, a new intervention has been introduced (using a smaller size lumbar puncture (LP) needle). Can it be mentioned as an interventional study?
2. Apart from needle size and experience of the physician performing LP, person assisting the procedure, level of sickness of the baby (e.g., need for mechanical ventilation, inotropic support, sclerema), level of sedation, and spinal level of needle insertion are some important factors which determine the success of LP in premature infants. Hence, these factors could have been considered in multivariate analysis.
3. Though authors have suggested 25-G needle to reduce the incidence of traumatic LP, we feel "one size may not fit for all" and there should be a gestation-specific recommendation on the exact needle size.
4. There is no standardized cutoff for RBCs in cerebrospinal fluid (CSF) to define as traumatic LP [2–4]. Authors have chosen 500 RBC/mm<sup>3</sup> as cutoff to define traumatic LP. Clinically, a lower cutoff of 200 to 300 RBCs/mm<sup>3</sup> might be relevant. It would be better if they could have provided a break up category for < 500 RBC/mm<sup>3</sup>.
5. Similarly, in the absence of standard definition for WBC in CSF to diagnose meningitis in traumatic LP, CSF culture is the gold standard to define meningitis and it should be emphasized.

Finally, we agree with the authors that future adequately powered randomized controlled trials on this subject are needed before we can incorporate it in standard practice.

**Authors' contributions** TS contributed in collection of literature and drafted the manuscript. TS is the guarantor of final manuscript. KMG equally contributed in collection of literature and drafted the manuscript. All the authors approved the final version as submitted.

## Compliance with ethical standards

**Conflict of interest** The authors declare that there is no competing interest.

**Ethical clearance and consent** Not applicable.

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