



Post-dural-puncture headache in a seven-month-old boy?

A seven-month-old boy had a diagnostic lumbar puncture for possible meningitis. This was performed by the on-call paediatric registrar. A Quincke 25 Gauge 1-inch neonatal lumbar puncture needle (Becton-Dickinson, Spain) was inserted in the L 4-5 inter-space. Clear cerebrospinal fluid (CSF) was obtained on the first pass. The needle bevel was parallel to the dural fibres.

The initial results were equivocal and the patient was admitted and treated with intravenous antibiotics. At forty eight hours the CSF cultures were clear, treatment was ceased and he was discharged home. On discharge he was smiling, feeding well and hydrated.

Once home, his mother noted him to become more irritable. This was made worse by his being upright and relieved when he was supine. His physician mother described his anterior fontanelle as mildly sunken. The lumbar puncture site was normal and he remained afebrile. The following day he became less irritable when he was upright and his fontanelle appeared more normal.

The diagnosis of post-dural-puncture headache (PDPH) in infants is difficult due to their inability to verbalise pain. Diagnosis depends on posture-related signs, which are exacerbated on sitting or standing and relieved or reduced by lying down.¹

PDPH is generally regarded as rare in children less than ten years old.² Some regard the incidence to be as common in children as in adults. Typically, the headache is mild and does not last for long.^{1,3} Kokki et al found a PDPH incidence of 5% in 200 children ranging from 2 to 128 months. The youngest child was twelve months old. The onset of the headaches ranged from the day of procedure to Day 3 post-procedure, with a duration of one to five days.

The use of atraumatic pencil point needles and the smallest gauge needle possible may reduce the incidence of PDPH.⁴ We prefer the Quincke 25 Gauge 1-inch neonatal lumbar puncture needle because of ease of insertion and identification of dura mater, and the CSF-flow characteristics.

This seven-month-old boy had signs suggestive of a PDPH and we believe he is the youngest reported in the literature to date. Since PDPH can be a complication of dural puncture, parents need to be informed. The apparently low incidence in young children may reflect their inability to verbalise pain and the failure of clinicians to elicit the signs suggestive of PDPH.

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References:

1. Kokki H, Hendolin H, Turunen M. Postdural puncture headache and transient neurologic symptoms in children after spinal anaesthesia using cutting and pencil point paediatric spinal needles. *Acta Anaesthesiol Scand* 1998;42:1076–82.
2. Wee LH, Lam F, Cranston AJ. The incidence of post dural puncture headache in children. *Anaesthesia* 1996;51:1164–6.
3. Kokki H, Salonvaara M, Herrgard E, Onen P. Postdural puncture headache is not an age-related symptom in children: a prospective, open-randomized, parallel group study comparing a 22-gauge Quincke with a 22-gauge Whitacre needle. *Paediatr Anaesth* 1999;9:429–34.
4. Halpern S, Preston R. Postdural puncture headache and spinal needle design. *Metaanalyses. Anesthesiology* 1994;81:1376–83.