Obstetric Anaesthesia
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All that fits isn't eclampsia

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23/12/20 at 2250 Inadvertent siting of spinal catheter. Offered resite, declined. NVD in room 6 hours later.

25/12/20 postural headache reported, PDPH diagnosed, opted for conservative management

26/12/20 Headache improved, mobilising independently

26/12/20 at 1600 2 episodes of upper limb twitching over 2 hours with photophobia

27/12/20 at 0400 Emergency bleep to ward, patient witnessed to have generalised convulsion lasting 5 minutes

27/12/20 at 0415 Urgent CT head requested. MRI brain arranged following CT results. Levetiracetam started

30/12/20 Patient discharged home with neurology follow-up. Continue levetiracetam. No residual deficits on discharge

Introduction

Intracranial subdural haematoma (ISH) due to inadvertent puncture of the spinal dura mater following central neuraxial blockade is exceedingly rare, with fewer than 100 cases reported.[1] In obstetrics, ISH secondary to epidural anaesthesia is quoted to be 1:500,000.[1] We present an obstetric case exemplifying these consequences, ultimately presenting with seizure, also revealing an undiagnosed cerebral structural abnormality.

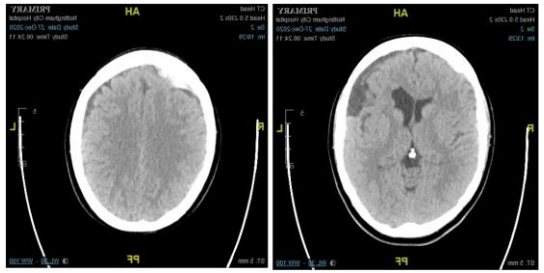
Case Report

During labour, a lumbar epidural was sited following maternal request. Insertion was uneventful and a 3ml test dose of 0.1% levobupivicaine with 2mcg/ml fentanyl was administered, yielding instant analgesia but without motor blockade or cardiovascular instability. Unintentional intrathecal location was suspected but offer to resite was declined. Patient proceeded to accomplish normal vaginal delivery with blood loss of 1L. Postnatal day 1, a post-dural puncture headache (PDPH) was suspected and joint decision was to manage conservatively. The next day, she felt improved and was able to mobilise independently, therefore repealing indications for epidural blood patch (EBP). Several hours later, patient reported 2 episodes of upper limb twitching with associated photophobia. 10 hours later, she suffered a generalised tonic-clonic seizure lasting 5 minutes. After stabilising, an urgent CT head was arranged. Subsequent discussion with neurology advised starting levetiracetam and MRI brain to review. The patient sustained no further seizures or lasting neurological deficits and was discharged home with neurology outpatient follow-up.

Patient

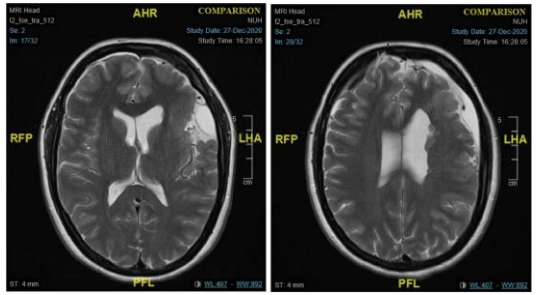
- 28 year old primigravida
- No significant past medical history or medication history
- BMI 31
- Induction of labour at 36 weeks gestation for obstetric cholestasis
- Unremarkable admission bloods, except deranged liver function

CT Head



- Right acute subdural (SD) haematoma with left SD collection
- Left sided nodular heterotopic and left perisylvian polymicrogyria

MRI Brain



- Left cerebral convexity SD hygroma
- Smaller right frontal convexity SD haemorrhage
- Extensive underlying parenchymal and ventricular system/CSF space developmental abnormalities in the left hemisphere

Discussion

A postpartum headache is a common complaint, with an incidence of 39% amongst parturients.[2] PDPH is an established differential, however, clinicians should be aware that ISH is a rare but potentially fatal consequence associated with this diagnosis. Clinical suspicion of ISH should be triggered if there is a persistent headache, change in nature of headache or any focal neurology.

Neuro-diagnostic imaging is essential to facilitate further evaluation, particularly due to the potential for a life-threatening cause of the headache.[3] Moreover, evidence suggests that performing EBPs in those with suspected or confirmed ISH may be detrimental.[3]

This case ultimately highlighted the rare but significant consequence of ISH, which was perhaps intensified by an underlying cerebral abnormality unbeknownst to both the patient and the anaesthetic team prior to labour.

References

1. Szeto V, Kosirog J, and Eilbert W. Intracranial subdural hematoma after epidural anesthesia: a case report and review of the literature.Int J Emerg Med 2018; 11:36.
2. Stella, CL, Jodicke, CD, How, HY. et al. Postpartum headache: is your work-up complete? American Journal of Obstetrics and Gynecology 2007; 196(4):318.e1-318.e7.
3. Cuypers V, Van de Velde M, and Devroe S. Intracranial subdural haematoma following neuraxial blockade in the obstetric population: a literature review with analysis of 56 reported cases.Int J Obstet Anesth 2016; 25: 58 -65.