Anaesthetic Management of a Parturient with Pyogenic Ventriculitis for Caesarean Delivery

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Introduction

- Acute CNS infections in pregnancy are rare but associated with significant morbidity and mortality¹⁻³.
- We present the unusual case of pyogenic ventriculitis secondary to sinusitis in a parturient, and subsequent anaesthetic management for caesarean delivery.

Case Report

A 24 years old female (Para 1⁺⁰), presented at 36 weeks gestation with severe headache. CT brain confirmed evidence of sinusitis and oral antibiotics were commenced.

At 38 weeks gestation, she represented with worsening occipital headache, nausea and neck stiffness. The patient was afebrile, WCC 12.2 x 10⁹/L and CRP 20U/L. She was referred for urgent neurology assessment.

CT intracranial venogram was negative for venous sinus thrombosis but demonstrated frontal, ethmoidal and maxillary sinusitis.

New onset of pyrexia and change in behaviour despite antibiotics prompted further investigation, and a lumbar puncture revealed purulent CSF. Bacterial meningitis secondary to sinusitis (*Strep Constellatus*) was diagnosed and treated with triple antibiotic therapy (Ceftriaxone, Vancomycin, Amoxicillin).

Subsequent MRI brain showed purulent fluid within the dependent lateral ventricles, revising the diagnosis to ventriculitis (figure 1).

At 39 weeks the patient underwent uneventful LSCS under SAB.

References

1. Glimaker M, Johansson B, Grindborg O, et al. Clin Infect Dis 2015;60:1162-69
2. Hughes DC, Raghavan A, Mordekar SR et al. Postgrad Med J 2010;86:478-85
3. Bodilsen J, Schonheyder HC, Nielsen H. BMC Infect Dis 2013;13:321

Discussion

- Bacterial Ventriculitis /meningitis is a medical emergency.
- Signs and symptoms may be masked in pregnancy.
- Changes in neurology warrant urgent attention^{1,2}.
- Prompt recognition and appropriate antibiotic choice / duration is paramount for optimal patient outcome.

Figure 1:

MRI Brain.

DWI Axial slices occipital poles lateral ventricles.

Fluid-fluid level occipital poles.

Diffusion characteristics consistent with purulent fluid

Conclusion

- Spinal anaesthesia may be safely administered in patients undergoing treatment for ventriculitis.
- Six weeks of intravenous antibiotic therapy and on-going neurology assessment is required in this specific patient population at risk of hydrocephalus³.