Case Report of a Posterior Fossa Haemangioblastoma in Pregnancy: A Rare and Sinister Cause of Hyperemesis

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Background: Brain tumours during pregnancy are very rare, occurring in only 2.0–3.2 per 100,000 women of reproductive age,[1] and present both diagnostic and management challenges. Interestingly, the symptoms of some brain tumours increase in severity during pregnancy, purportedly due to progesterone receptor expression or the vascular and endocrine changes in pregnancy.[1,2] Presented is a case of a posterior fossa haemangioblastoma presenting with severe nausea, vomiting, and anorexia throughout pregnancy but diagnosed after headache and diplopia postpartum

Aims: To describe the course of, and discuss the diagnostic challenges of identifying, an emetogenic intracranial mass in pregnancy.

Case: A 33-year-old gravida 2, para 0 woman with no significant medical history presented to our tertiary obstetric unit at 22 weeks gestation with worsening nausea, vomiting, anorexia, intractable hiccups and 7% weight loss from a normal pre-pregnancy weight. Despite extended antiemetic regimes, symptoms persisted. She was largely biochemically stable, except for transient hyponatraemia to 126nmol/L attributed to dehydration and crystalloid intravenous fluids. Serial ultrasounds for fetal growth and wellbeing were normal. Neurological examination performed for dizziness at 34 weeks was unremarkable. Pregnancy continued until an elective maternal request caesarean section was performed at 39 weeks, delivering a healthy 2.99kg neonate.

The patient represented two weeks postpartum with headache and diplopia, prompting neuroimaging. Initial CT venogram and subsequent MRI diagnosed severe obstructive hydrocephalus secondary to 4th ventricle space-occupying lesion. Neurosurgeons promptly placed an external ventricular drain, then performed stereotactic subtotal excision of a benign 4th ventricle haemangioblastoma. Following a four-month acute and rehabilitation admission, the patient was discharged home with ongoing rehabilitation including nasogastric feeds for a bulbar palsy. Follow-up MRI scan excluded tumour recurrence to date. Although she has now returned to independently completing her activities of daily living, the lasting psychosocial impact on the family unit remains unmeasurable.

Discussion: This case demonstrates the diagnostic challenge of intracranial masses during pregnancy as the symptoms of increased intracranial pressure overlap with the exceedingly more common syndrome of pregnancy-related nausea and vomiting. Aspects which may have signalled a sinister cause include the worsening symptoms from midtrimester, lack of therapeutic response and the atypical symptom of intractable hiccups which is characteristic of certain brainstem masses. Although earlier diagnosis is unlikely to have improved outcomes in this case, it would have given the opportunity to discuss the mode and timing of delivery. Caesarean section is usually recommended to avoid the elevation in intracranial pressure associated with vaginal delivery.[1] Neuraxial analgesia should similarly be carefully considered given possibility of dural puncture and tonsillar herniation. Timing of birth must balance impact of prematurity against maternal benefits of earlier surgical intervention.[1]

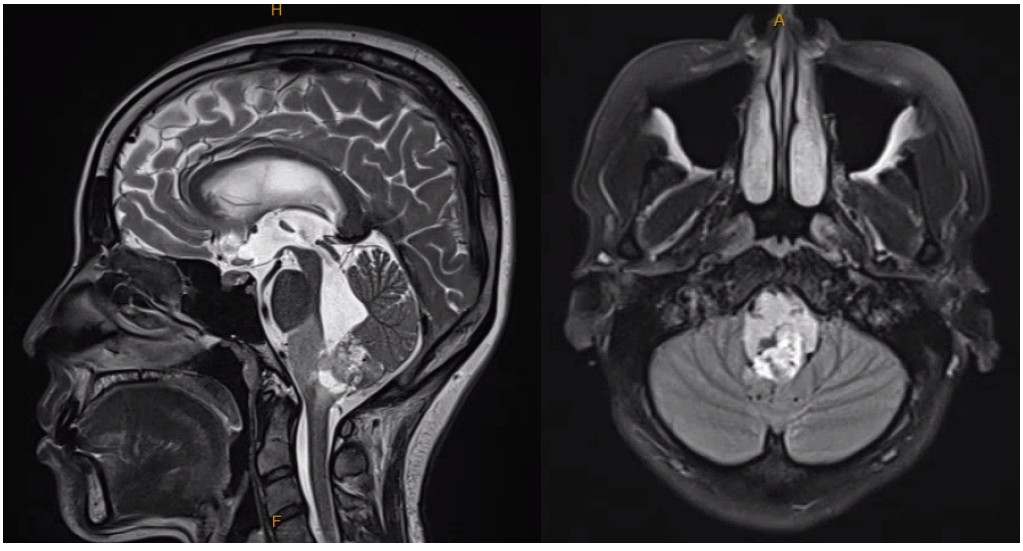

Figure 1: MRI imaging, both T2 sagittal (left) and FLAIR axial (right) demonstrating a 4th ventricle obstructing mass measuring 22x10x23 mm, with marked contrast enhancement. Secondary effects of this mass include brainstem oedema and severe hydrocephalus

References

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