

Balancing Brain and Baby: Anaesthesia for a Third Trimester Meningioma

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INTRODUCTION

Meningiomas in pregnancy are rare but pose significant risks for both the mother and baby because rapid changes in size may occur. A multidisciplinary approach is needed to ensure the best outcome.

CASE REPORT

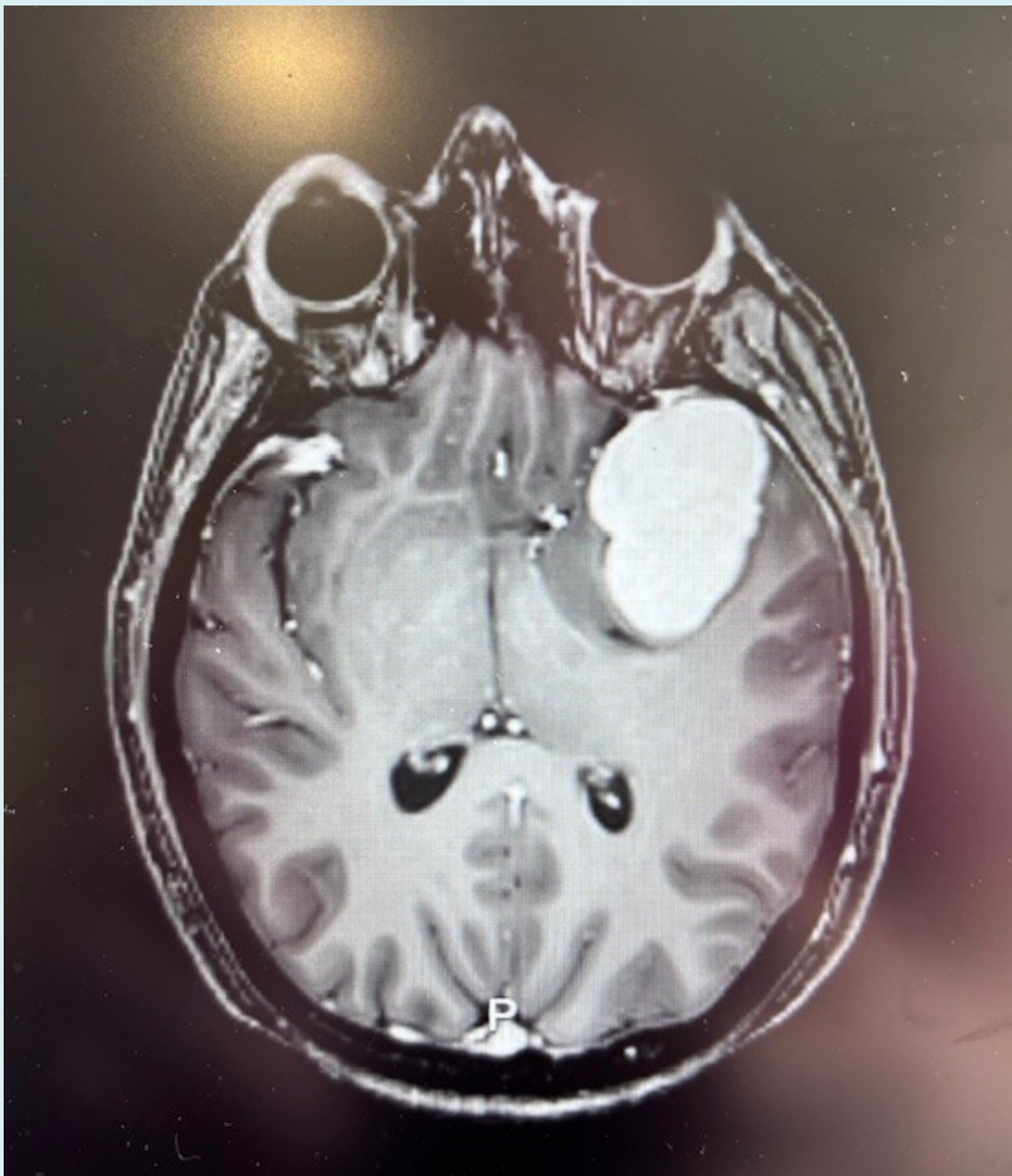
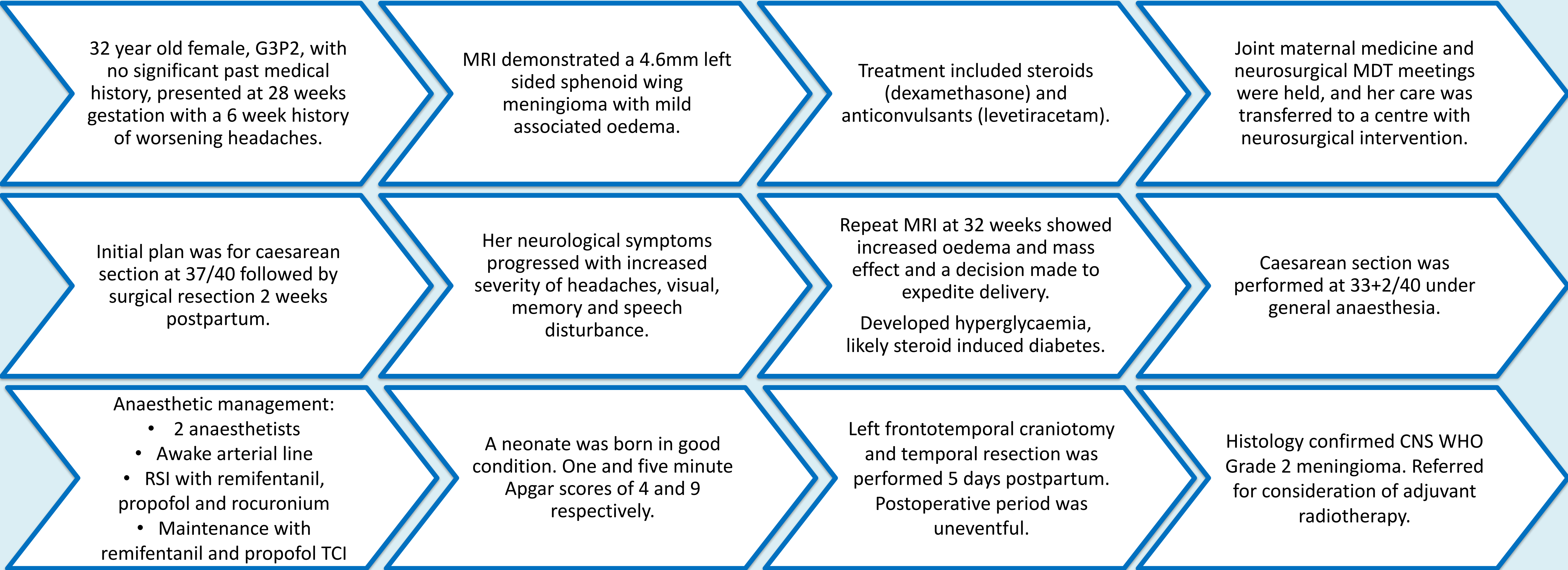


Figure 1: 30 week MRI

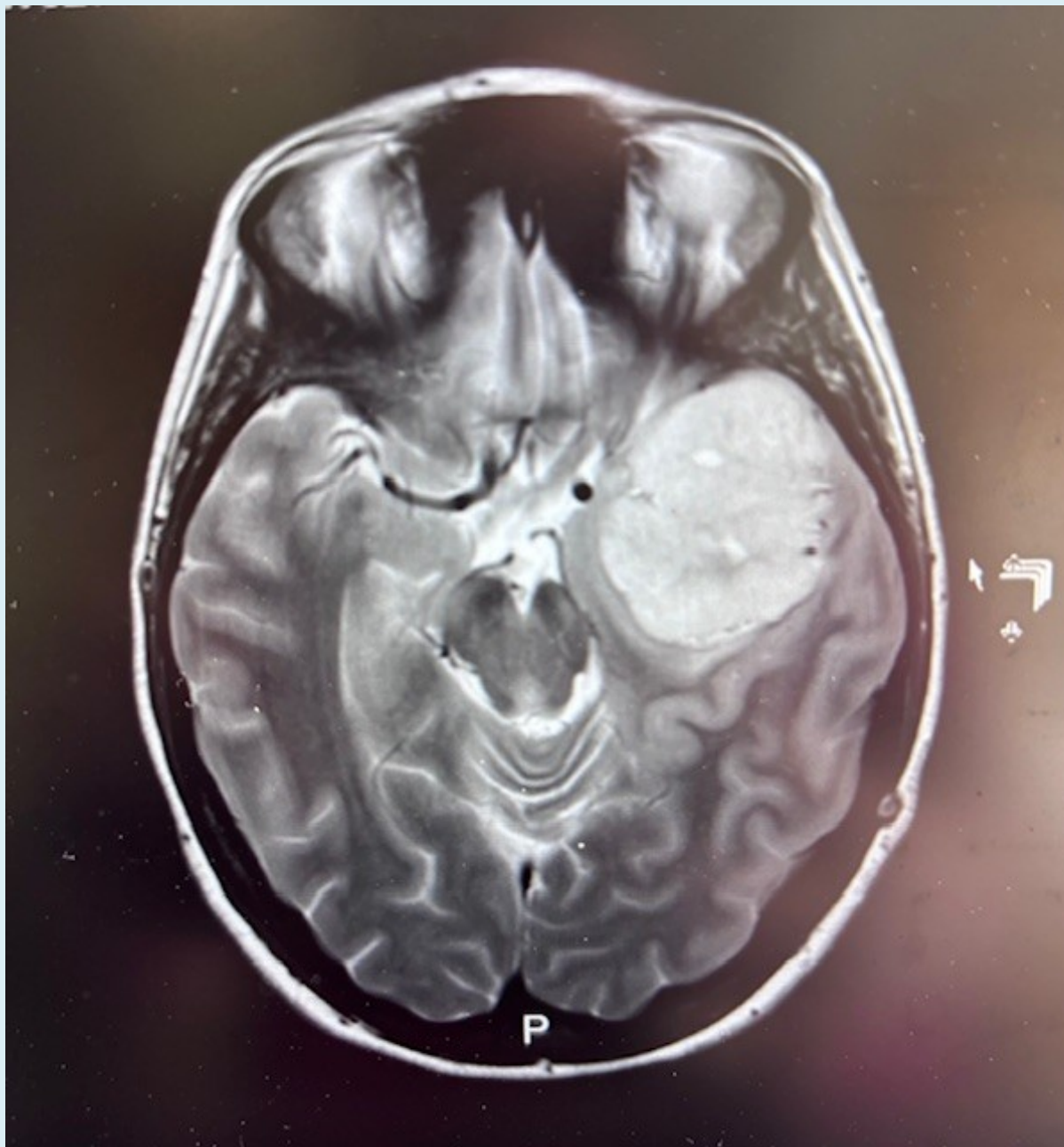


Figure 2: 32 week MRI

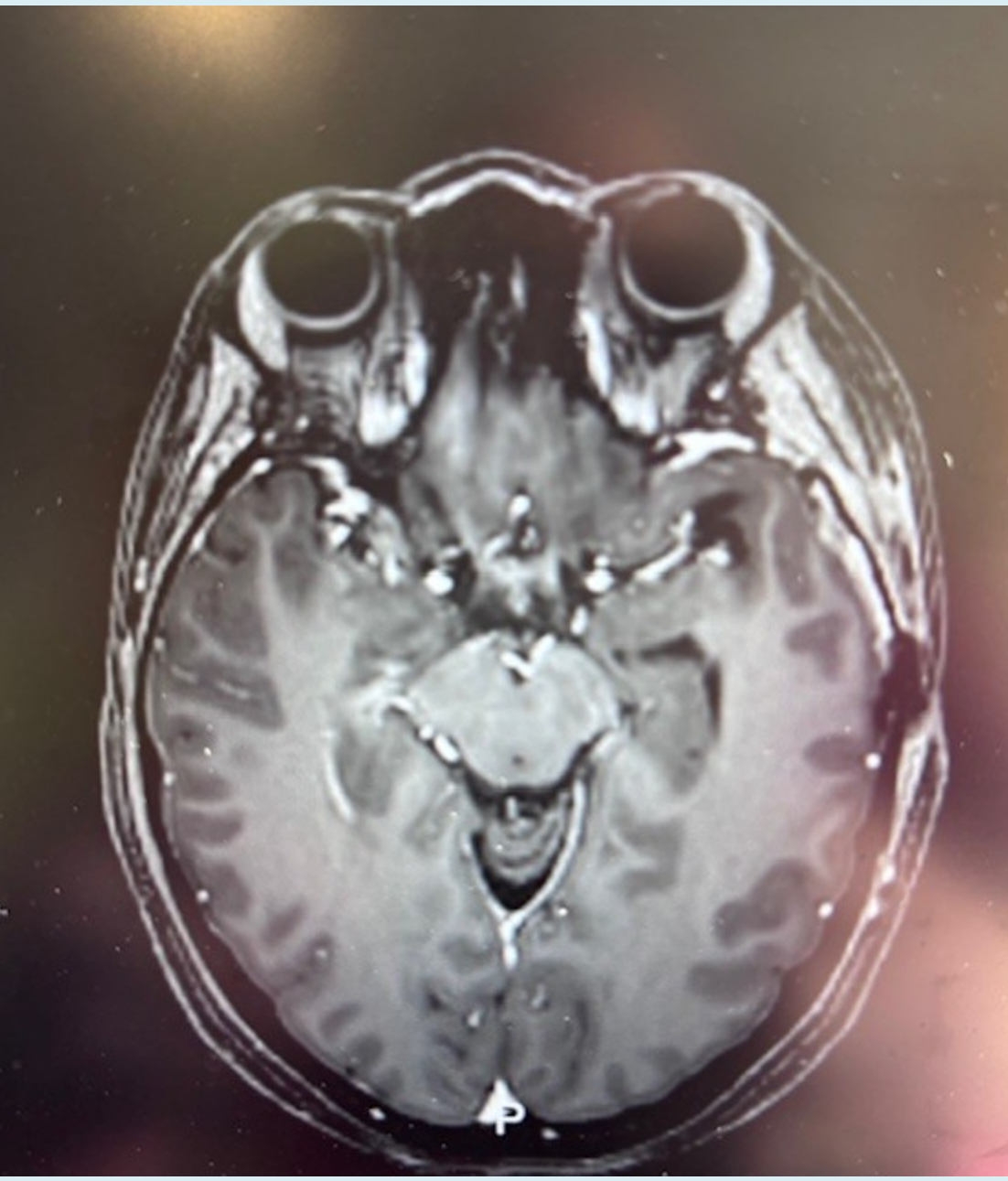
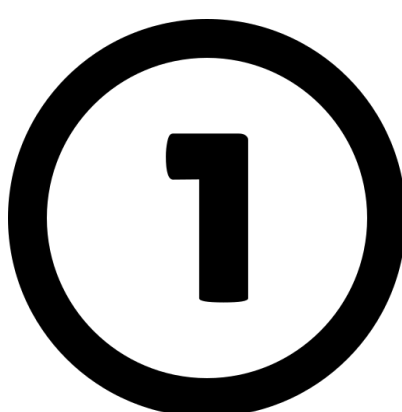
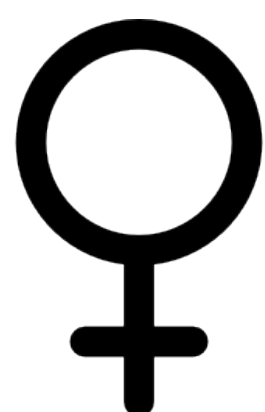


Figure 3: Post-resection MRI

DISCUSSION - MENINGIOMAS



- Most common primary brain tumour in adults
- Usually benign and slow growing
- Originate from arachnoid cells of meninges
- Sphenoid wing meningioma account for 20% of meningiomas



- 2:1 female to male ratio
- Incidence increases with age – most common in 6th and 7th decades of life



- Rare in pregnancy
- Can get rapid increases in size due to hormonal (progesterone) and haemodynamic changes (increased blood volume and vascularisation)
- Management depends on clinical presentation and gestational age



- MRI preferred imaging modality
- Maternal risks – intracranial hypertension, hydrocephalus
- Fetal risks – preterm delivery, low birth weight, adverse effects due to maternal medication

DISCUSSION – ANAESTHETIC MANAGEMENT

- A preterm caesarean section was carried out to prevent the maternal complications associated with raised intracranial pressure.
- Neuraxial techniques were contraindicated due to raised intracranial pressure.
- Anaesthetic management prioritised a neuroanaesthetic approach with smooth intubation and extubation, meticulous blood pressure control, and avoidance of increases in intracranial pressure.
- Additional antihypertensives agents including labetalol were prepared.
- Suxamethonium and nitrous oxide were avoided.
- Consideration was given to standard versus rapid sequence induction and to the choice of opioid to attenuate the hypertensive response to laryngoscopy (alfentanil versus remifentanil).
- General anaesthetic for craniotomy 5 days postnatally – considerations given for physiological effects of pregnancy.

REFERENCES

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2. Hortobagyi T, Bencze J, Murnyak, B, Kouhsari M.C, Bognar L, Marko-Varga G. Pathophysiology of Meningioma Growth in Pregnancy. Open Medicine. 2017; 12: 195-200.