

Optimising Outcomes in Pregnancy with Cerebral Arteriovenous Malformation: A Multidisciplinary Approach

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BACKGROUND

- Hemorrhagic stroke is a significant cause of maternal and foetal mortality during pregnancy and puerperium, with cerebral arteriovenous malformations (AVMs) being a rare but serious contributor.
- The prevalence of AVM-related intra-cerebral haemorrhage in pregnancy is low (0.01%–0.5%), making management protocols challenging.
- Conflicting evidence exists regarding the risk of AVM rupture during pregnancy, highlighting the need for further understanding in this area.

CASE REPORT

- We present a case of a 26-year-old primigravida with a known AVM and Arnold-Chiari type I malformation managed by a multidisciplinary team(MDT) comprising neurosurgeons, obstetricians, neurologists, and anaesthesiologists.
- The patient, with a history of epilepsy, was on levetiracetam and experienced worsening seizures during pregnancy, necessitating specialised care.
- Neuroimaging confirmed the presence of an AVM without acute changes, leading to a joint decision to delay stereotactic treatment until after pregnancy.
- The seizures were deemed to be functional dissociative seizures on review by the neurology team and the dose of levetiracetam was tapered.
- She was under regular follow-ups with epilepsy nurse throughout the pregnancy.
- Regarding place and mode of delivery, the recommendation by the MDT was to deliver in tertiary unit via a planned caesarean section at 38 weeks by general anaesthesia.
- The plan of management was mutually agreed by the local unit who continued to provided the obstetric care.
- Steroids was offered pre delivery which was declined by the patient.
- The patient underwent an uncomplicated planned caesarean section at 38 weeks to minimize the risk of AVM rupture during delivery, resulting in a successful maternal and foetal outcome.

DISCUSSION

- Conservative management of unruptured cerebral AVMs during pregnancy requires a comprehensive and MDT approach.
- In this case, close collaboration between local and tertiary care providers ensured a well-documented and individualised treatment plan, emphasising the importance of shared decision-making with the patient.
- Regular monitoring and tailored interventions led to a positive outcome for both mother and baby.

CONCLUSION

- Personalised care tailored to each patient's unique circumstances is paramount in achieving favourable pregnancy outcomes with cerebral AVMs.
- The collaborative efforts of diverse healthcare disciplines, guided by shared decision-making principles, are crucial in ensuring the best possible care for pregnant women with complex neurological conditions.

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