

SUBARACHNOID HEMORRHAGE: DO NOT MANAGE ALONE

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Introduction

Hemorrhagic cerebral accidents are the third leading non-obstetric cause of mortality in pregnancy. While most etiologies of peripartum headaches are benign, subarachnoid hemorrhage (SAH) should always be on the differential diagnosis. Diagnosing and managing SAH can be challenging as the etiology is often unknown and management varies from close observation and blood pressure control to emergent neurosurgical intervention. In all case, a multidisciplinary approach to management is strongly recommended.



Case presentation



37-year-old G1P0 female with BMI 40.6 kg/m² and asthma presents at 32 weeks gestation with sudden onset headache and posterior neck pain

Imaging Obtained

- •Initial CT showed a SAH
- •CTA then demonstrated possible ACA/communicating artery saccular aneurysm with intermittent visualization of bilateral MCA branches concerning for vasospasm

Management

- Admitted to the hospital and started on nimodipine, levetiracetam, daily transcranial dopplers
- •Continuous fetal monitoring was utilized and betamethasone was given to the patient to accelerate fetal lung maturation
- Multidisciplinary approach

Antepartum Course

- •Imaging in the following days revealed stable SAH and acute infarcts from embolic phenomenon with unremarkable TTE
- •Discharged home on acetaminophen, gabapentin, cyclobenzaprine and methocarbamol for persistent severe headache, fludrocortisone and salt tablets due to risk of cerebral salt wasting and the remaining course of her 21 days of nimodipine to prevent vasospasm

Delivery

•38w2d, the patient's membranes ruptured, and she delivered a healthy infant via cesarean delivery with a CSE due to the need for strict blood pressure control

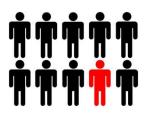


When you diagnose a Subarachnoid Hemorrhage.....





Consult neurosurgery and OB immediately; determine medical or surgical management



Individualize treatment based on maternal status and gestational age



Determine optimal delivery plans

References

I.Ascanio I.C., Maragkos G.A., Young B.C., Boone M.D., Kasper E.M., Spontaneous Intracranial Hemorrhage in Pregnancy: A Systematic Review of the Literature. Neurocrit Care. 2019 Feb; 30(1):5-15. doi: 10.1007/si2028-018-05014-5.
Zeleighley A, Ghynn R, Scullen T, Mathkour M, Werner C, Berry JF, Carr C, Abou-Al-Shaar H, Aysenne A, Nerva JD, Dumont AS. Aneurysmal

2. Beighley A, Glynn R, Scullen T, Mathkour M, Werner C, Berry JF, Carr C, Abou-Al-Shaar H, Aysenne A, Nerva JD, Dumont AS. Aneurysmal subarachnoid hemorrhage during pregnancy: a comprehensive and systematic review of the literature. Neurosurg Rev. 2021 Oct;44(5):2511-2522. doi: 10.1007/s10143-020-01457-2. Epub 2021 Jan

3.Darbhamulla SV, Reddy R. Subarachnoid haemorrhage in pregnancy. J Obstet Gynaecol. 2007 Jan; 27(1):80-1. doi: 10.1080/01443610601062630.