

Navigating the Anesthetic Challenge: Spinal Anesthesia in Reversible Cerebral Vasoconstriction Syndrome during Cesarean Section: A case report

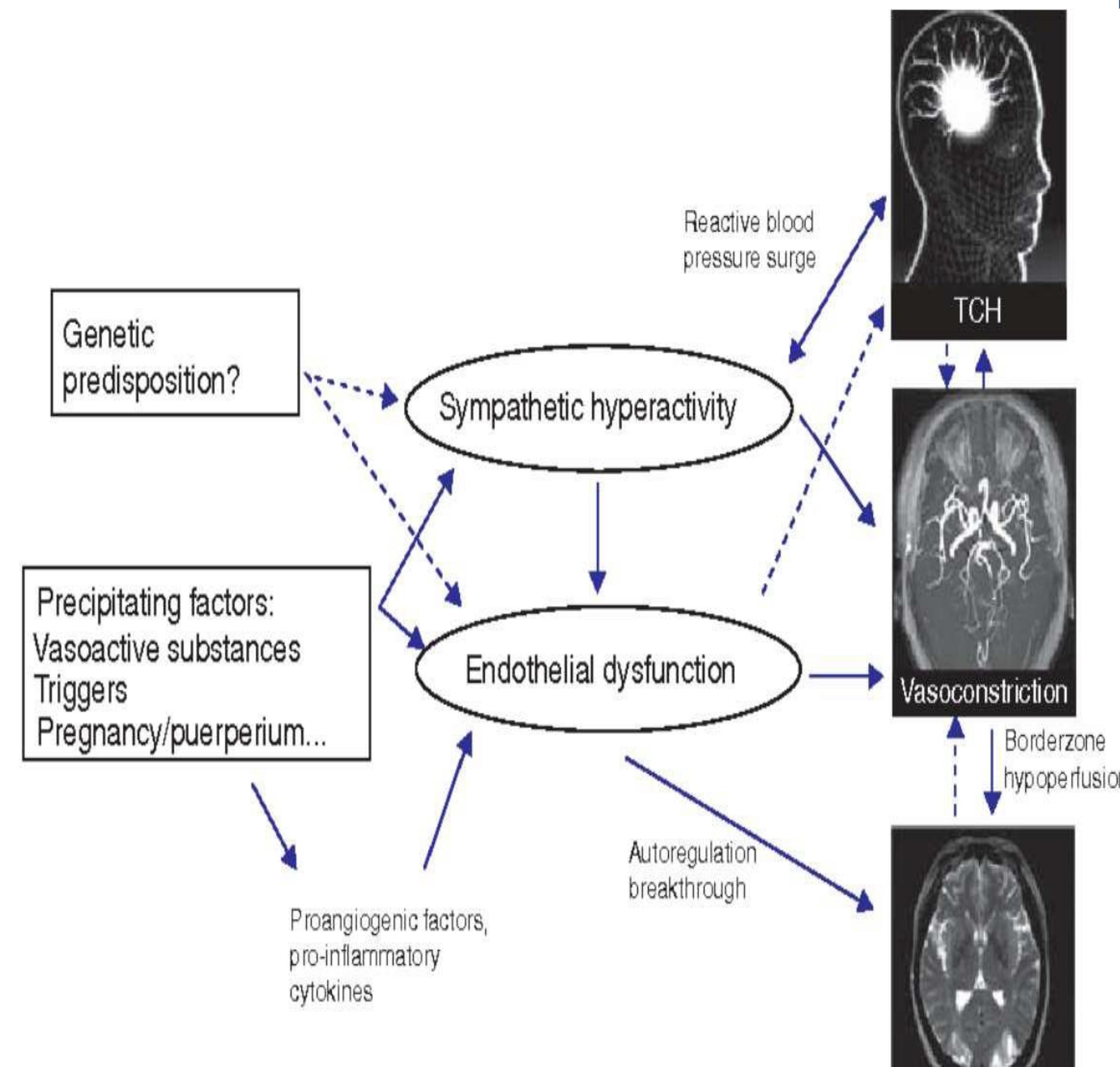
Case: Brief PMH:

- A 25-year-old G1P0 female with a PMH of migraines and RCVSx2 complicated by a subarachnoid hemorrhage (SAH)
- Arrived for an elective Cesarean Section
- The goal was to avoid vasoactive medications due to the patient's history of RCVS, and measures were taken to proactively manage spinal anesthesia-induced hypotension.
- In addition to standard ASA monitors, a noninvasive finger cuff (Edwards ClearSightSystem) was used for continuous noninvasive hemodynamic monitoring.
- The patient received 500ml of 5% albumin before intrathecal injection and 500ml bolus of Lactated Ringer's as a co-load.
- After an uneventful spinal block, patient was placed in a 30°left lateral tilt and the Trendelenburg position.
- During the case, the patient additionally received 250 ml of 5% Albumin and 1000 ML of LR.
- The patient remained hemodynamically stable throughout the procedure, and no vasoactive medications were used.

References

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- 3-Peace JM, Bhat AD, Peralta FM. Anesthetic Management of Reversible Cerebral Vasoconstriction Syndrome During Vaginal Delivery: A Case Report. A APract. 2020;14(11):e01298. doi:10.1213/XAA.000000000000129 8
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Proposed pathophysiology of reversible cerebral vasoconstriction syndrome. 4



Discussion.

- (RCVS) presentation varies widely and can include:: isolated severe thunderclap headaches, with full recovery in most patients
- Rare instances of permanent brain injury, which may be related to intracerebral hemorrhage, cerebral edema, stroke, seizure, and even death.
- Reversible cerebral vasoconstriction syndrome (RCVS) can occur spontaneously, but up to 80% of individuals with RCVS experience identifiable trigger factors, such as pregnancy or exposure to vasoactive substances (e.g., triptans, ergots, NSAIDs, and vasopressors).
- Pregnant patients with RCVS who undergo a spinal block for the Cesarean Section pose a unique challenge for an anesthesiologist as use of vasoactive drugs (Phenylephrine) has become standard practice to manage post-spinal hypotension.
- There are no guidelines published on post-spinal hypotension management in patients with RCVS, although avoiding vasopressors is recommended.
- The authors report their experience in managing post-spinal hypotension without vasoactive medications in a patient with RCVS who underwent spinal anesthesia for Cesarean Section.