Anesthetic management for cesarean delivery in a parturient with familial hypokalemic periodic paralysis: a case report.

Presenting Author: Rayna A Clay M.D.
Presenting Author's Institution: Brigham and Women's Hospital - Boston, MA
Co-Authors: Rayna A Clay M.D. - Brigham and Women's Hospital - Boston, MA
Jeannie Carabuena M.D. - Brigham and Women's Hospital - Boston, MA

Introduction: Familial hypokalemic periodic paralysis (FHPP) is a rare inherited disease characterized by skeletal muscle ion channel dysfunction. Clinical manifestations include hypokalemia and severe weakness of extremities that is reversible with treatment. Recent literature suggests that the parturient's general health and strength prior to pregnancy is more predictive of episodic paralysis rather than pregnancy itself (1). Anesthetic management during vaginal delivery has been previously described (2). We present a case of anesthetic management during cesarean delivery while the patient was simultaneously experiencing an episode of spasmodic paralysis.

Case: A 29-year-old G2P1 (on oral acetazolamide) with a history of FHPP had had prior NSVD complicated by postpartum paralysis for 2 days. Previous bouts of paralysis were induced by mental and physical stress as well as changes in temperature, and treated with potassium chloride (KCl) and oral anxiolytics. This pregnancy was marked by bouts of hyperemesis gravidarum triggering more frequent, albeit not severe, attacks of muscle weakness. On presentation, this patient was now in early labor with painful contractions and exhibited severe muscle weakness of all extremities. Respiratory musculature and sensation were intact.

Potassium and glucose on arrival were 3.1 mmol/L and 69 mg/dL respectively. Since the patient was in early labor and had planned on cesarean delivery, the decision was made to proceed to operative delivery. KCl 20mEq and IV midazolam were administered. A spinal anesthetic was performed with subsequent delivery of a healthy male infant. There was no further progression of weakness perioperatively. By post-op day 2 her paralysis significantly improved and by post-op day 4 she was able to walk with the assistance of a walker. Potassium levels remained stable after initial repletion.

Discussion: Reports of FHPP during pregnancy are limited. While the goal is to decrease bouts of paralysis by maintaining normal potassium levels and minimizing stress, we were faced with treating an acute episode during labor. Although this patient was given the option to deliver vaginally, she chose to proceed with her previous plan of surgical delivery. After stabilization with IV anxiolytics and KCl, a neuraxial technique was well tolerated for the delivery. In choosing this approach we were able to address further elevation of catecholamines, minimize further exacerbation of weakness and facilitate in the delivery of a healthy fetus.

References: