Anti-NMDA Receptor Encephalitis in an Eight Year Old
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ABSTRACT

Background
Anti-NMDA receptor encephalitis is a rare syndrome associated with antibodies to the NMDA receptor. Greater than 80% of patients diagnosed are women between the ages of 19 and 24. This syndrome requires meticulous management throughout all stages and understanding of pharmaceutical mechanisms. PSH increases the likelihood of hemodynamic instability so it would be prudent to have vasopressors, antihypertensive agents, and anticholinergic medications available. Certain drugs should be avoided or limited due to their mechanisms of action.

Conclusion
Understanding this disease and anticipation of potential complications is key to the anesthetic care of anti-NMDA receptor encephalitis patients. There is limited research regarding the anesthetic management in the pediatric age group.

CASE PRESENTATION

History
- An 8 year old, otherwise healthy girl with no known allergies presented to CHLA with chief complaints of lethargy and mental status changes. She had fever, lethargy, nausea and vomiting for 2 weeks prior to admission.
- Labs were normal except NMDAR antibodies were found in the CSF fluid confirming diagnosis of anti-NMDA receptor encephalitis.
- A MRI of chest, abdomen and pelvis under anesthesia was ordered.

Vitals and Present State
- Weight: 27.9 kg
- Pre-procedure vitals were variable but latest SpO2 was 100%. She had episodes of apnea with dropping SpO2 which triggered O2 administration.

Anesthetic Management
- Anesthesia was induced with dexmedetomidine 20mcg IV bolus and sevoflurane up to 4%.
- She was on a desmethylmedidine infusion at 1mcg/kg/hr.
- Anesthesia was maintained with propofol and sevoflurane.

A MRI of chest, abdomen and pelvis under anesthesia was ordered

Discussion
Understanding this disease and anticipation of potential complications is key to the anesthetic care of anti-NMDA receptor encephalitis patients.

REFERENCES

More than 75% of patients recover completely and only have mild residual deficits but the rest are severely disabled or die.

Anti-NMDA receptor encephalitis is challenging for the anesthesia provider during all phases.

It is important to limit anesthetic delivery to these patients. If this is not possible it is important to be prepared for the hemodynamic instability these patients can present with.

The research on the anesthetic management of these patients is limited.