**CASE REPORT**

An 11-year-old female with no past medical history presented at a local hospital with new onset seizures which were treated with increasing doses of anticonvulsants. Her condition worsened and upon transfer to our institution, her mental status was stable, but continuous abnormal hand and facial movements were noted. EEG was consistent with encephalitis. No seizure activity was noted. LP showed elevated WBC’s and antibiotics were initiated. She began having hallucinations accompanied by a fast and incomprehensible speech. She was intubated and an ICP monitor was placed. ICP’s were elevated and hypertonic saline was started to achieve ICP of less than 20mmHg. CSF was positive for anti-NMDA receptor IgG antibody and she was started on IVIG, methylprednisolone, and rituximab. CT scan ruled out co-existing tumor. She was sedated in the PICU with propofol and lorazepam.

After failing several extubation attempts, she was taken to the OR for a tracheostomy and gastrostomy tube placement. Anesthetic management included a continuation of the propofol infusion, in addition to isoflurane, fentanyl, and rocuronium. The procedure was uneventful and the patient was transported back to the PICU in stable condition.

**DISCUSSION**

It is thought that anti-NMDA receptor encephalitis may be responsible for up to 4% of cases of encephalitis and nearly 400 cases have been reported; very few have been reported in the pediatric population. The disease usually progresses from symptoms of psychosis and memory impairment to seizures, decreased responsiveness and, autonomic dysfunction requiring respiratory support. The majority of patients are young women and 59% of them have a co-existing tumor. Positive outcome is associated with resection and aggressive immunotherapy.

There are very few reports of anesthetic management in the pediatric population with NMDA receptor antibodies. Several drugs used in anesthesia work through the NMDA receptor, namely ketamine and nitrous oxide. It could be expected that patients with antibodies to the NMDA receptor will have exaggerated responses to medications that work through this mechanism. While propofol is less likely to work through the NMDA receptor, there is one case report in which a patient had exaggerated response to propofol on induction, resulting in extreme hypotension that was refractory to fluid resuscitation. Our patient did not have such sensitivity to propofol and her anesthetic was uneventful. Unfortunately, her clinical status has not improved, and she remains mechanically ventilated and sedated.