

## [NM-275] Seizure Masked as Laryngospasm Following Extubation in a Child

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**Summary:** We present a case of a 14-month-old boy who became hypoxic soon after extubation in the OR after an endoscopic third ventriculostomy. The presentation and timing of this event was initially diagnosed as laryngospasm but subsequently was recognized to be seizure activity.

**Case Report:** A 14-month-old boy with a history of Chromosome 7 micro-deletion, seizures, enlarged ventricles and dysphagia was scheduled for an endoscopic third ventriculostomy and Omay Reservoir placement. The patient was on caffeine and nighttime apnea monitoring. After standard ASA monitors were applied in the OR, the child underwent a smooth inhalational induction with sevoflurane. A peripheral IV was established and, after rocuronium administration, the trachea was intubated. The case proceeded uneventfully; anesthesia was maintained with fentanyl and sevoflurane in air-oxygen. At the conclusion of the case neuromuscular blockade was reversed. After the patient was breathing spontaneously, and appeared to be purposefully moving all extremities, he was extubated. Approximately 1 to 2 minutes after extubation, the patient's SpO<sub>2</sub> started to decrease. Positive pressure ventilation was attempted with facemask oxygen. Because of the extensive head-wrap after the surgical procedure it was not clear to the anesthesia team whether adequate bag-valve-mask respiratory support was supplied. The child's SpO<sub>2</sub> continued to decrease and propofol was administered with the intent of reintubating the patient's trachea. Renewed respiratory efforts to assist the child subsequently resulted in appropriate chest rise and the child's SpO<sub>2</sub> returned to normal. Over the next several minutes the patient was noted to have nystagmus and stiffening of upper extremities with abnormal movements. Within ~ 20 minutes the child was more alert and he was transported to the PICU for continued monitoring.

The patient's mother subsequently gave a history of episodes at home where the child developed abnormal movements, was unresponsive, and "turned blue."

**Discussion:** Seizure activity can lead to respiratory compromise in patients of all ages. Laryngospasm, as an isolated manifestation of a seizure disorder, is rare but has been associated with temporal lobe seizures. Independent risk factors for post-extubation hypoxemia in children include having an active URI, tracheal intubation (<5 years of age), history of prematurity, reactive airway disease, parental smoking, surgery involving the airway, and presence of copious secretions and nasal congestion. Upon further discussion with the patient's parents, it was found that the patient frequently had seizure episodes associated with cyanosis and apnea. The hypoxia seen after extubation was likely secondary to seizure activity and not a result of laryngospasm as initially diagnosed. In the face of post-extubation hypoxemia, airway management should as always be directed to reestablishing a patent airway while assisting ventilation and delivering adequate tidal volumes of oxygen.

Effects of seizures on autonomic and cardiovascular function. *Epilepsy Curr.* 2004 March; 4(2):43–46.

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