

Anesthetic Considerations in a Parturient with Neurofibromatosis Type 1

A Case Report

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Background

Neurofibromatosis type 1 (NF -1) is an inherited single gene disorder

NF-1 presents with neurofibromas in many locations, including the spinal cord and the larynx

Tumors are often highly vascularized

Tumors can change in size and location throughout the patient’s lifespan, including throughout pregnancy

Neurofibromas in the oropharynx, larynx or spinal cord have anesthetic implications for the obstetric patient

Clinical Presentation

29- year- old G1P0 patient with NF-1 presents to labor and delivery at 35 weeks with premature rupture of membranes

Past Medical History

Hydrocephalus treated with ventriculocisternostomy and ventricular catheter device for ICP monitoring

Plexiform cutaneous neurofibromas in lumbar spine at 22 weeks, unable to complete follow up imaging prior to presentation

Physical Exam

Favorable airway: Mallampati I, thyromental distance > 3 fingerbreadths, oral aperture and neck extension adequate

Cardiac and Respiratory exams within normal limits

Severe nausea and vomiting, COVID-19 positive

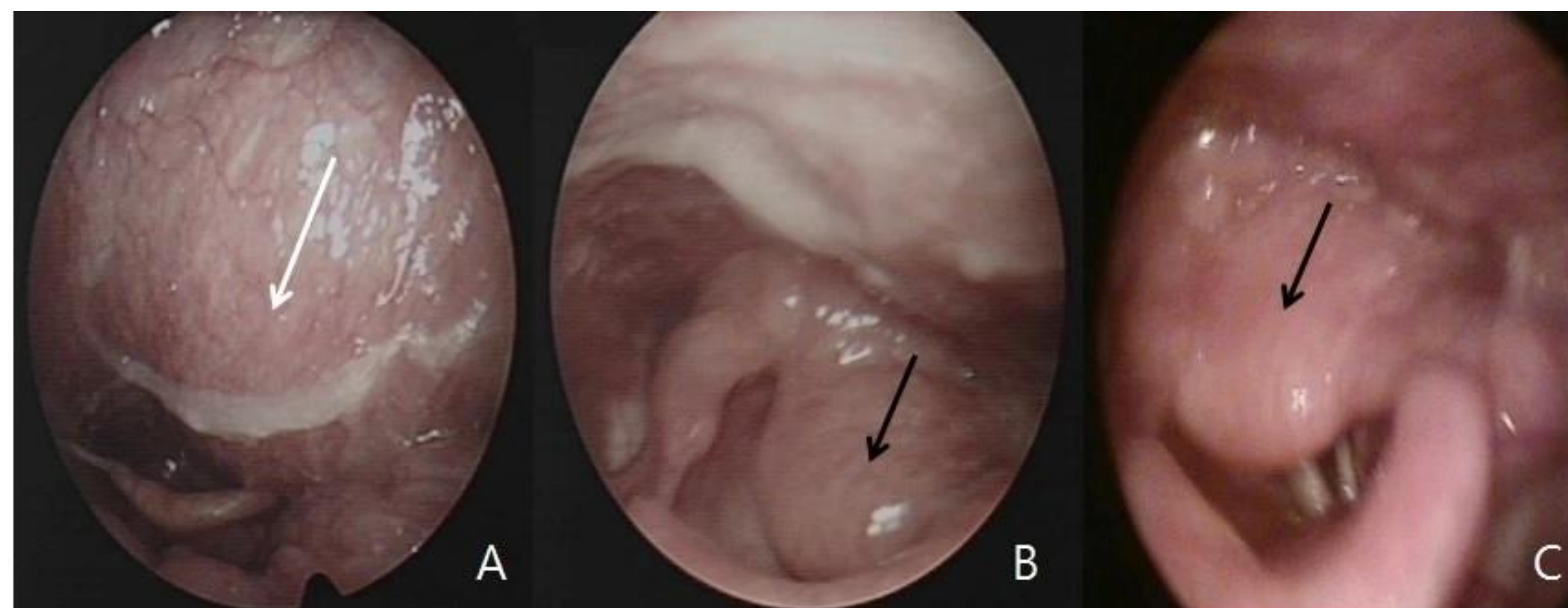
Clinical Course

Uncomplicated cesarean section was performed under general anesthesia

Subcutaneous Neurofibroma



Example of Laryngeal Neurofibroma



Discussion

Anesthetic management of patients with NF-1 must consider the multiple locations of neurofibromas and their ability to change over time

Puncture of neurofibromas in the spinal cord can lead to epidural hematoma. Imaging is recommended prior to neuraxial procedures

Neurofibromas in the oropharynx or the larynx can create an unanticipated difficult airway

The risk for cesarean delivery and pregnancy complications, including hypertension, preeclampsia, poor fetal growth, placental abruption and oligohydramnios, was significantly increased among mothers with NF1

Most anesthetic management of patients with NF-1 is uncomplicated

References

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