Anesthetic management of a symptomatic sphenoid wing meningioma resection after delivery of 27 weeks intrauterine fetus: Case Report

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INTRODUCTION

Meningioma is a common tumor in the female population. Among all cranial meningiomas, 20% are localized in the sphenoid wing making it challenging for resection due to proximity to carotid arteries. Meningioma development during pregnancy is comparable with that in non-pregnant women of the same age group. However, pregnancy makes patients more susceptible for tumor growth. By means of molecular studies, estrogen and progesterone receptors have been identified in this malignancy. Due to this concern, cranial tumors that grow faster during pregnancy require urgent resection.

CASE REPORT

We report a 31 year old intrauterine pregnant patient at 27 weeks with a symptomatic large sphenoid wing meningioma. She was G2P1 which presented for obstetric follow up complaining of increasing intensity headache not alleviated with over the counter nor prescribed analgesics. Mostly complaining of persistent generalized headache originating within the left retro-orbital region, dizziness, difficulty walking, nausea, vomiting, and loss of memory. MRI was performed, revealing a large sphenoid wing mass with midline shifting, as well as evidence of intracranial hypertension (Fig. 2-3). Upon examination patient had motor aphasia and dysarthria. Patient was oriented in person but not in place and time. Cesarean section and tumor resection was scheduled for same day by Obstetricians, Neurosurgeons, and Neuroanesthesia service. Steroids for fetal lung maturity were given. She was taken to operating room (OR), standard ASA noninvasive monitoring, as well as radial artery catheter was placed. A rapid sequence smooth induction for an emergent cesarean section was granted with propofol and succinylcholine. General anesthesia maintenance was achieved with sevoflurane, cisatracurium, and fentanyl for the first part, then used sufentanil. Immediately after an uncomplicated cesarean section, a central venous catheter was placed and patient was prepared for Neurosurgery intervention. A left frontotemporal craniotomy was performed for radical tumor excision. During surgery patient lost approximately six liters of blood which were replaced with PRBC, FFP, Platelets, and crystalloids. At the end of surgery patient was transferred to the Neurosurgical Intensive Care Unit otorrhachially intubated for hemodynamic monitoring and neuroprotection. She was discharged on the postoperative day 5.

DISCUSSION

The management of pregnant patients with brain tumors in the sphenoid area is a great challenge to obstetricians, neurosurgeons and neuroanesthesiologists. In this patient urgent intervention was mandatory due to worsening symptoms and progression of neurologic deficits. The presence of a symptomatic sphenoid wing meningioma combined with the anticipated changes of pregnancy makes this an interesting and challenging case.

REFERENCES