Epidural Anesthesia for Cesarean Delivery in a Morbidly Obese Parturient with Spinal Meningioma

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Abstract Body: A morbidly obese parturient was transferred to our facility at 36 weeks gestation with new onset bilateral lower extremity paresis, as well as bowel and bladder incontinence. Prior to this pregnancy, she had no significant past medical or surgical history. The patient was admitted to our maternal fetal medicine unit for further workup and neurosurgical evaluation.

Initial considerations included spinal cord lesions such as vascular malformation, meningioma, and lipoma. Emergent MRI of the thoracolumbar spinal was obtained and revealed a 1x2.3x1.2 cm anterior intradural extramedullary mass centered at the T9 vertebral body level with associated severe spinal canal narrowing and compression of the spinal cord with spinal cord edema, most consistent with a diagnosis of spinal cord meningioma. After collaborative consultation amongst the anesthesiology, neurosurgery, and obstetrics services, the decision was made to proceed with immediate cesarean delivery, followed by neurosurgical decompression the following day.

After discussion with the attending neurosurgeon, a slowly dosed epidural anesthetic was considered the safest option, taking into consideration the patient's overall clinical picture and neurological status. She received standard pretreatment with sodium citrate, metoclopramide, and famotidine, and was taken to the operating room. She was coloaded with 1L Lacted Ringer's solution and underwent uneventful placement of an epidural catheter at the L2-3 interspace. After a negative test dose, she received 20 mL of lidocaine 20 mg/mL plus epinephrine 5 μg/mL, 2mL of sodium bicarbonate 75 mg/mL, and fentanyl 80 μg. This dose was administered slowly in 5 mL increments at 5 minute intervals. A bilateral T7 sensory level was obtained. Low transverse cesarean section was performed and the patient gave birth to a healthy female infant weighing 3165 grams with Apgar scores of 8 and 9 at 1 and 5 minutes, respectively. Blood pressure remained within 20% of the patient’s baseline thoughout the perioperative period without vasopressor supplementation. The following day, the patient underwent uneventful general endotracheal anesthesia for T8-10 laminectomy for complete tumor resection without complications. Pathology was consistent with meningioma. The patient received intensive inpatient rehabilitation for the next 10 days prior to hospital discharge. At six week follow-up the patient had regained full strength in bilateral lower extremities as well as bowel and bladder function. Her only complaint at that time was a neuropathic pain in her left lateral leg. While many may consider spinal cord pathology a relative contraindication to neuraxial anesthesia, successful epidural catheter placement has been reported in such situations.

This is one of the few reported cases of spinal meningioma presenting during pregnancy. It is unique in that it describes successful conduct of epidural anesthesia for cesarean delivery.