Local Anesthetic Infiltration For Cesarean Section In A Patient With Spinal Muscular Atrophy Type II

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Introduction: Use of local anesthetic infiltration for cesarean section delivery is used infrequently in patients for which there are limitations to both neuraxial and general anesthesia. We will discuss a case in which a parturient with a history of Spinal Muscular Atrophy Type II (SMA II) underwent cesarean section using local anesthetic infiltration.

Case Presentation: A 21 year old parturient with history of SMA II and severe restrictive lung disease was scheduled for repeat cesarean section at 37 weeks gestation. The patient underwent successful cesarean under local anesthetic infiltration in 2007. Secondary to the patient's spinal hardware extending the entire thoracic and lumbar spine, a neuraxial technique was not feasible. She preferred to have another operative delivery under local anesthesia with the possible use of general anesthesia if deemed necessary. In the operating room with standard ASA monitors, the patient was pre-medicatied with titrated midazolam (total 4 mg) and morphine (total 2 mg) prior to local anesthetic infiltration using 0.5% lidocaine with 1:200,000 epinephrine. Infiltration started with subcostal injection at anterior axillary line (20mls), midline cutaneous (40 mls), fascial (30mls), and peritoneal (10mls) totaling 100 mls total of local anesthetic. Further sedation was accomplished using a propofol infusion adjusted between 20-30 mcg/kg/min. She also received intermittent inhalational 50% nitrous oxide. Overall she tolerated the procedure well stating she only felt "pressure nothing sharp." A girl was born with Apgar scores of 9/9.

Discussion: Local anesthetic infiltration for cesarean section is a rarely used method of delivery when both neuraxial and general anesthetic options are limited. This patient's limitations were a result of the neurodegenerative disorder SMA II caused by a deficiency of SMN protein resulting in atrophy of motor neurons (sensory is largely intact). She is affected by weakness, restrictive lung disease, and recurrent respiratory infections increasing the risk of general anesthesia and postoperative ventilation. Furthermore, secondary to her significant spinal instrumentation, neuraxial techniques would be extremely challenging. This patient was willing to undergo cesarean section under local infiltration despite risk of inadequate analgesia, of local anesthetic toxicity, and to the fetus prior to delivery. In conclusion, local infiltration is a viable option for cesarean delivery in a select population of patients and with prior education can be performed with significant patient satisfaction.