

10-2016

Intrapartum Tonic-clonic Seizure in a Patient Undergoing Cesarean Delivery During Spinal Anesthesia With Bupivacaine

Stanlies D'Souza

Baystate Health, dsouzastan@yahoo.com

Follow this and additional works at: https://scholarlycommons.libraryinfo.bhs.org/all_works

Part of the [Medicine and Health Sciences Commons](#)

Recommended Citation

Alshoubi A, D'Souza S. Intrapartum Tonic-clonic Seizure in a Patient Undergoing Cesarean Delivery During Spinal Anesthesia With Bupivacaine. ASA Annual Meeting, Oct 2015.

This Presentations, Research is brought to you for free and open access by Scholarly Commons @ Baystate Health. It has been accepted for inclusion in All Scholarly Works by an authorized administrator of Scholarly Commons @ Baystate Health.



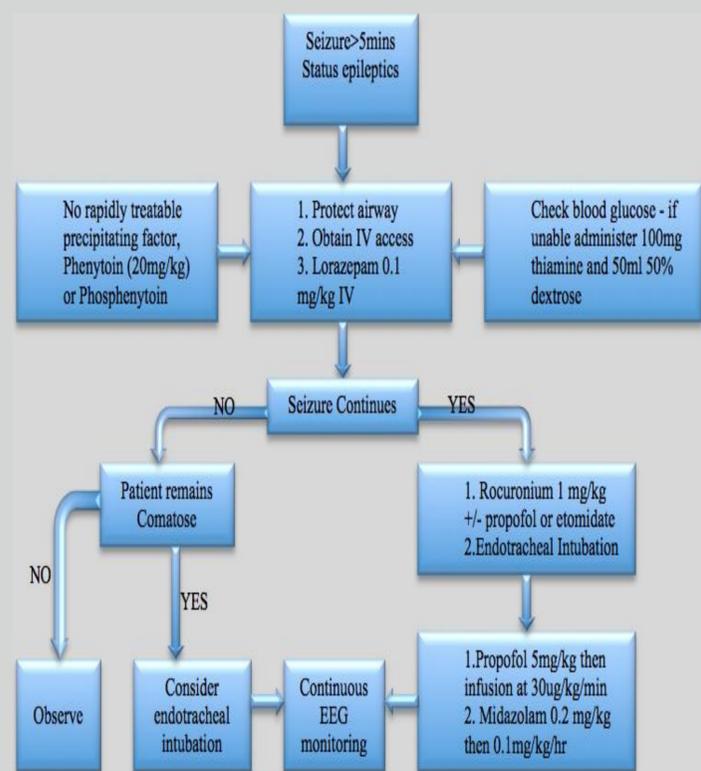
Introduction

Spinal anesthesia provides rapid onset and a reliable block, it also maintains airway reflexes and consciousness of the parturient and is associated with less neonatal depression. Generalized seizures as a complication following epidural anesthesia with bupivacaine has been reported, but rarely following spinal anesthesia.

Case Description

A 42 years old woman, gravida 11 para 4, 39 weeks gestation, she had an absence of pre-eclampsia. There were no reported complications with previous anesthetics. The patient underwent an emergent C-section for fetal distress under spinal anesthesia. The spinal puncture was performed at L4-L5 interspace. A total of 9 mg of Bupivacaine in dextrose with 200 ug of Morphine and 10 ug of Fentanyl was injected in the subarachnoid space. During the surgery she had 3 episodes of tonic-clonic seizure, during which she was hemodynamically stable with no loss of airway protection, the seizures were treated and resolved with Benzodiazepines. The baby was delivered with no issues.

Airway Management in Seizures



Absolute indications to intubate

- Hypoxemia (SpO2 <90%) secondary to hypoventilation or airway obstruction
- Treatment of underlying etiology (e.g., intracranial bleed with elevated ICP)
- Prolonged seizure refractory to anticonvulsants (to prevent accumulating metabolic debt [acidosis and rhabdomyolysis])
- Generalized convulsive status epilepticus

Relative indications to intubate

- Prophylaxis for the respiratory depressant effect of large doses of anticonvulsants (e.g., benzodiazepines and barbiturates)
- Termination of seizure activity to facilitate diagnosis workup (e.g., CT)
- Airway protection in prolonged seizures

Intrapartum Risk

Approximately 1% of pregnant women will suffer a seizure, and the initial seizure can present in the antepartum, intrapartum, or postpartum period. The most common cause of seizures during pregnancy is preexisting epilepsy, followed by eclampsia. Patients with a history of previous seizures may have a higher risk of suffering a seizure during pregnancy because of the physiologic changes of pregnancy or because of elective cessation of anticonvulsant medications. Other risk factors of seizures include intracranial neoplasms or hemorrhage, cerebral vein thrombosis, local anesthetic toxicity, encephalitis, and amniotic fluid embolus.

Complications that can develop due to spinal anesthesia are local anesthetic toxicity, neural injury, spinal headache, back pain, hematoma, abscess, paresthesia or motor weakness, and very rarely myoclonus. Convulsions induced by local anesthetics have been reported in cases of epidural anesthesia using 0.75% bupivacaine, but whole-body convulsions after bupivacaine injection for spinal anesthesia are very rare.

Possible Etiology

- Allergy to anesthetic agent
- Syncope
- Hyperventilation
- Supine Hypotensive Syndrome
- Effect of Spinal Anesthesia on Cerebral Cortex
- Metabolic Changes of Pregnancy- such as hydration and dilution of calcium, sodium, and magnesium
- Hypoglycemia
- Intracranial neoplasms or hemorrhage
- Uterotonic Agents: IV injection of oxytocin 10 IU and 0.2 mg of methylergometrine maleate can cause hypertension and seizures

Conclusion

We experienced a case of a patient who developed intraoperative unconsciousness accompanying generalized tonic-clonic seizures after spinal anesthesia for cesarean section. A thorough preanesthetic assessment can reveal risk factors for seizures that can assist in making an accurate differential diagnosis of the cause of a peripartum seizure.

References

1. Dumitru AP, Carcia ER, Burkhart SE, Potter JK. Convulsive seizure following spinal anesthesia for cesarean section: possible etiologic factors. *Anesth Analg.* 1962;41:422-428.
2. Akerman N, Hall W. A case of late postpartum seizures after epidural analgesia. *Int J Obstet Anesth.* 2005;14:163-66.
3. Long TR, Hein BD, Brown MJ, Rydberg CH, Wass CT. Posterior reversible encephalopathy syndrome during pregnancy: seizures in a previously healthy parturient. *J Clin Anesth.* 2007;19:145-148.