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Elective Cesarean Section Vasopressor Administration Strategy for Maternal Hypoxemia Caused by Combined Vertebral Epidural Anesthesia

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Description

Combination spinal-epidural anaesthesia (CSE anaesthesia), which resulting in less medication exposure for the foetus than general anaesthesia, is often utilised for elective caesarean sections. It also enables the mother to deliver the baby while still being conscious. Maternal hypotension, which affects 90% of patients and has been linked to nausea and vomiting, is the most frequent side effect of spinal anaesthesia. In severe cases, foetal bradycardia [1-3] and cardiovascular collapse could happen. Research on the ongoing series of events involving the mother and newborn is scarce, despite the fact that there have been many reports on the issue.

There was no difference in the development of transitory tachypnea between neonates who got general anaesthesia and those who underwent CSE anaesthesia in one trial comparing the two types of anaesthesia for elective caesarean sections, even though maternal blood pressure was not assessed.

The duration of spinal anaesthesia has also been connected to adverse events such neonatal acidosis and persistent hypotension. Vasopressors are frequently used in clinical practise to treat maternal hypotension brought on by spinal anaesthesia. On how to employ them, there hasn't been any agreement, though. We investigated continuous bolus administration of phenylephrine or ephedrine to maintain blood pressure as well as continuous bolus administration of phenylephrine or ephedrine prior to CSE anaesthesia to prevent maternal hypotension.

The reduction in maternal blood pressure variability was the main result, and the impact on the newborn was the secondary one. We focused on maternal blood pressure variability and maternal background as a result, and we looked at the neonatal impact from a variety of perspectives. The bolus and phenylephrine models were selected to investigate maternal circulatory alterations and their impacts on the infant.

The CSE approach has been discussed in the medical literature for application in urological and gynaecological surgery, lower limb trauma surgery, general surgery, and orthopaedics. According to clinical trials, the CSE approach is preferable to an epidural block alone and quickly creates ideal surgical circumstances, comparable to a single-shot subarachnoid block. The CSE approach establishes surgical anaesthesia quickly, saving 15-20 minutes when compared to epidural anaesthesia. Additionally, subarachnoid anaesthesia might be added to epidural catheterization because it can be insufficient when used alone [4,5]. To give parturients the best analgesia possible during labour, the CSE technique is frequently employed in obstetric practise. It offers efficient, quick-acting analgesia with negligible toxicity or motor block danger. Additionally, using an epidural catheter enables the extension of analgesia, which is usually needed throughout labour. Additionally, the same epidural catheter can be utilised to administer operative anaesthesia if a surgical birth is necessary. Depending on the substance or substances taken, spinal analgesia starts to take effect nearly immediately and lasts for between 2 and 3 hours.

Adults undergoing orthopaedic, urological, vascular, gynaecological, and general surgical operations have all benefited from the use of CSE. There have been reports of it being used as the only anaesthetic approach in patients having abdominal aortic aneurysm repair and sigmoid colectomy. The procedure has also been used to correct inguinal hernias in newborns. The advantages of employing CSE to give analgesia in labour include the pain being relieved more quickly than with a traditional epidural procedure (especially in late labour) and maintaining mobility. A recent Cochrane review of 14 randomised controlled studies comparing CSE with epidural analgesia in labour found that CSE offers a quicker beginning of pain reduction that is also more likely to be satisfied by the mother. The review did not discover any differences in maternal mobility, headaches following a spinal puncture, the use of forceps during delivery, or the use of caesarean sections between CSE and epidural procedures.

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Conflict of Interest

Authors declare no conflict of interest

References

1. Ozden Omaygenc, Derya, Tugba Dogu and Mehmet Onur Omaygenc, et al. "Type of anesthesia affects neonatal wellbeing and frequency of transient tachypnea in elective cesarean sections." *J Matern Fetal Neonatal Med* 28 (2015): 568-572.
2. Knigin, David, Alexander Avidan, and Carolyn F. Weiniger. "The effect of spinal hypotension and anesthesia-to-delivery time interval on neonatal outcomes in planned cesarean delivery." *Am J Obstet Gynecol* 223 (2020): 747-e1.
3. Hall P.A, A. Bennett, M. P. Wilkes and M. Lewis. "Spinal anaesthesia for caesarean section: Comparison of infusions of phenylephrine and ephedrine." *Br J Anaesth* 73 (1994):471-474.
4. Raghuraman, Nandini, Lorene A. Temming and Molly J. Stout, et al. "Umbilical cord oxygen content and neonatal morbidity at term." *Am J Perinatol* 35 (2018): 331-335.
5. Robson, S.C., R.J. Boys, C. Rodeck and B. Morgan. "Maternal and fetal haemodynamic effects of spinal and extradural anaesthesia for elective caesarean section." *Br J Anaesth* 68 (1992): 54-59.

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