

Postoperative Back Pain Following Regional and General Anesthesia in Cesarean Section (CS) Surgery

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DESCRIPTION

Cesarean Section (CS) is one of the most common and widely recognized surgical procedures in obstetrics, performed to deliver a baby through an incision in the abdomen and uterus. In the context of CS, ensuring the safety and comfort of both the mother and the fetus is important. One of the important aspects of this surgery is anesthesia, which is typically administered to manage pain during the procedure. The two most common types of anesthesia used for CS are regional anesthesia (specifically spinal anesthesia) and general anesthesia. Both of these anesthetic techniques have their benefits and drawbacks, particularly in the postoperative period. In this study, we focus on comparing the incidence of headaches and back pain following regional anesthesia versus general anesthesia.

Types of anesthesia in cesarean section

Spinal anesthesia, a type of regional anesthesia, is the most commonly used anesthetic for CS, as it allows the mother to remain awake during the surgery while numbing the lower half of the body. This approach has the advantage of avoiding the need for mechanical ventilation and generally results in less blood loss compared to general anesthesia. However, spinal anesthesia is associated with a few known complications, including Post Dural Puncture Headache (PDPH) and back pain.

General anesthesia, on the other hand, involves rendering the patient unconscious and is typically used when regional anesthesia is contraindicated or when other medical factors require it. While general anesthesia provides complete unconsciousness, it can also increase the risk of postoperative complications, such as nausea, vomiting and hypotension. Moreover, it may necessitate mechanical ventilation, which can increase the risk of pulmonary complications, especially in high-risk patients.

Postoperative complications: Headaches and back pain

Headaches and back pain are two common complications that can arise following a CS, particularly with the use of spinal

anesthesia. Post Dural Puncture Headaches (PDPH) are caused by a leakage of Cerebrospinal Fluid (CSF) from the dura mater due to a puncture created during the spinal anesthesia process. This leakage causes a decrease in CSF volume, resulting in pressure changes that trigger headaches, which usually begin within two to three days' post-surgery. These headaches can range from mild to severe and may require further medical interventions to alleviate the discomfort.

Back pain, while not specific to any particular type of anesthesia, is frequently reported by patients after undergoing a CS. Back pain can vary in nature, ranging from acute, dull, localized, to diffuse discomfort. This pain is often attributed to the position the patient is placed in during the surgery or the physical stress placed on the back during the procedure. The incidence of back pain can also be influenced by the anesthetic technique used, as regional anesthesia may affect the back muscles differently than general anesthesia.

Study findings: Anesthesia type and postoperative pain

In our study, we found that 230 (82%) patients underwent CS with regional anesthesia (spinal anesthesia), while 49 (18%) patients were administered general anesthesia. The use of fentanyl, an opioid analgesic, was common during both anesthetic procedures. Postoperative back pain was reported by 96 (34%) of the patients, with 183 (66%) patients experiencing no back pain. The types of back pain varied: 13 patients reported acute back pain (5%), 20 patients reported dull pain (7%), 16 had diffuse pain (6%), 17 had localized pain (6%) and 30 patients experienced stabbing pain (11%).

As for headaches, our study found no significant correlation between the type of anesthesia used and the frequency of postoperative headaches. 41% of patients who received general anesthesia reported headaches, while 56% of those who received spinal anesthesia experienced headaches. Although there was a higher incidence of headaches in patients who received spinal anesthesia, the statistical difference was not significant, with a P-value of 0.051.

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Anesthesia and patient outcomes

Both regional and general anesthesia are associated with distinct advantages and risks. Regional anesthesia, such as spinal anesthesia, is particularly advantageous in minimizing blood loss, avoiding mechanical ventilation and providing more stable hemodynamics during surgery. However, it does carry risks, especially in older or high-risk patients. For instance, in cases of severe aortic stenosis or coagulation defects, regional anesthesia can lead to complications such as hypotension, headaches and potential neuronal injury. In contrast, general anesthesia is often preferred for patients with contraindications to regional techniques, though it may lead to increased risks of pulmonary complications, nausea, vomiting and hemodynamic instability post-surgery.

Despite the benefits of regional anesthesia, its association with complications such as PDPH is well-documented. In this study, we observed a relatively high incidence of headaches in patients who received spinal anesthesia, but the frequency did not differ significantly from those who received general anesthesia. This finding suggests that while spinal anesthesia is commonly linked

to PDPH, general anesthesia may also result in headaches, possibly due to other factors like changes in fluid balance or postoperative medication effects.

CONCLUSION

In conclusion, our study indicates that while both regional and general anesthesia are commonly used during Cesarean section surgeries, the occurrence of postoperative headaches and back pain does not appear in anesthesia administered. Spinal anesthesia was associated with a higher incidence of headaches, but this difference was not statistically significant compared to general anesthesia. Back pain, on the other hand, was a common complication across both anesthesia types, suggesting that it may be more related to factors such as surgical positioning rather than the anesthesia technique itself. Ultimately, the choice of anesthesia for Cesarean section should be guided by clinical indications, patient-specific factors and the risks and benefits of each option to ensure the safety and comfort of both the mother and the fetus.