Successful Treatment of Post Dural Puncture Headache with Sphenopalatine Ganglion Block in Post Caesarean Section Patient

Asmara Y[1],Sukmono R[2]

[1]Anasthesiologist, Tarakan Regional General Hospital, Central Jakarta, Indonesia

[2]Anasthesiologist, dr. Cipto Mangunkusumo National Central General Hospital, Central Jakarta, Indonesia

Introduction

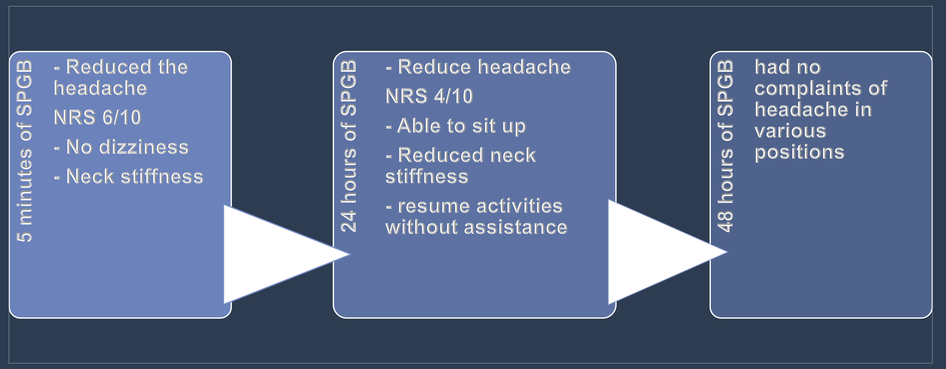
Post-dural puncture headache (PDPH) is often found in post-cesarean section patients after spinal anaesthesia. PDPH impairs the mothers' capacity to care for her child, restricts early ambulation, and raises the risk of persistent headache, venous thrombosis, and pulmonary embolism. Intravenous fluid replacement, analgesic medications, and theophylline are used as the conservative therapy of PDPH. If these initial therapy failed, epidural blood patching (EBP) is the standard gold treatment. However, EBP carries the risks for complications. Sphenopalatine ganglion block (SPGB) is an alternative for these patients. This case discusses post-dural puncture headache risk factors in post-cesarean section patients and sphenopalatine ganglion block as alternative pain intervention.

Methods (Description of the case)

The patient is a 26 years old primigravida, presented for first cesarean delivery at 37 weeks of gestational age due to breech presentation. We did spinal anaesthesia in a sitting position using a Quincke type 26 G spinal needle and was successfully done using the paramedian approach at the first attempt. Postoperative analgesia were 1 g paracetamol t.i.d. On postoperative day 2, the patient was consulted with the anaesthesiologist with reports of a numerical rating scale (NRS) of 8/10 positional headache. The headache was described as bilateral pressure on the head, which grew more intense when sitting, standing, or ambulating and lessen during supine position. The patient also reported photophobia, nausea, dizziness, but no phonophobia and vomiting. Vital indicators were within normal ranges. We chose Xylocaine 10% pump spray® (lidocaine 100 mg/ml) pumped once on a long applicator with a cotton swab tip. We insert the applicator parallel to both of the nostril's floors and placed it above the middle turbinate on the posterior pharyngeal wall for 5-10 minutes.

Results (Findings and Thoughts)

The patient's headache reduced from NRS of 8/10 to 6/10 after 5 minutes of sphenopalatine ganglion block. Twenty-four hours after the procedure, the patient can sit up, lower the neck tension and headache, and resume activities without assistance. The patient was released on the next day with a manageable headache. We questioned the patient 48 hours after the block who reported almost no headache with various positions. The spinal injection causes dural tears, and spinal anaesthesia involves injecting drugs into the spinal cavity; these procedures are more invasive than a diagnostic lumbar puncture. Cutting needles is related to a greater incidence of PDPH. The needle's entrance direction during lumbar dural puncture and the patient's posture may substantially impact the incidence of PDPH. A study reported that more than half of patients do not need an epidural blood patch following sphenopalatine ganglion block. Several studies and case reports supporting the reduction in pain with SPG blockade with significant value use the Visual Analogue Score (VAS) score. The findings imply that SPGB could be employed as an initial modality in treating PDPH to manage severe pain quickly. Lidocaine was recognized to have anti-inflammatory and analgesic characteristics. After the dural puncture, the triple preventive regimen of epidural saline, IV cosyntropin, and epidural morphine shows tremendous promise in reducing the incidence of PDPH and the requirement for a blood patch in obstetric patients. Fluid therapy hasn't been proven to be effective in preventing or treating PDPH.



Conclusions (Summary)

The use of SPG block can be a minimally invasive treatment for PDPH. The faster PDPH is treated using an SPG block resulted in better outcomes for the patient. Several studies have shown that patients who received SPG block did not need EBP as further management.

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