Sphenopalatine Ganglion Block: Management of Post-dural Puncture Headache After Cesarean Section

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Abstract
The sphenopalatine ganglion is a parasympathetic ganglion and has been blocked for various types of headaches and facial pain. We have reported a patient with severe post-dural puncture headache after cesarean section who showed rapid symptomatic improvement after a single sphenopalatine ganglion block.

Dear Editor

The Sphenopalatine ganglion (SPG) is a parasympathetic ganglion. SPG block has been applied for various types of headaches and facial pain. Here, we report a patient with severe post-dural puncture headache (PDPH) after cesarean section who showed rapid symptomatic improvement after a single sphenopalatine ganglion block. The written consent from the patient for this case report to be written up as well as for her photograph to be taken has been obtained.

The patient complained of a severe headache on the first postoperative day. The visual analog scale (VAS) score was evaluated as 10/10 and aggravated by movement. After detailed examination a diagnosis of PDPH was made. Movement was restricted and bed rest was prescribed. Paracetamol 1 gram and 50 mg caffeine orally every 6 hours was administered, as well as an intravenous infusion of 200 mg theophylline were administered. Normal saline infusion was started at the rate of 2 ml/kg/h. However, the next day the patient showed no improvement of symptoms and was agitated. SPGB was suggested to the patient. After obtaining written consent, the patient was made to lie in the supine position with her neck slightly extended. SPG block was performed by a trans-nasal approach. A total of 2 puffs of Lidocaine 10% spray was applied through both nares with an applicator. Approximately 5-10 minute after the trans-nasal injection the patient described significant relief of symptoms of her headache. The VAS score was evaluated as 0/10. The following day the patient was able to sit up and eat. The patient remained in hospital for 4 days with no further complaint of headache.

The sphenopalatine ganglion is located in the pterygopalatine fossa posterior to the middle turbinate. The tip of the applicator does not come into direct contact with ganglion, but the local anesthetic infiltrates around it. After dural puncture cerebrospinal fluid is lost continuously. Compensatory vasodilation occurs and this vasodilatation causes a headache. If the parasympathetic activity is blocked with a SPG block uncontrolled vasodilation is prevented and patients feel symptomatic relief. Trans nasal SPG block is an effective technique for pain control in patients with PDPH and this technique appears to be a simple, generally safe method. It, however, needs further study and investigation regarding its efficacy.
REFERENCES


