

Sphenopalatine ganglion block: A newer modality for management of postdural puncture headache

Madam,

Sphenopalatine ganglion block has been used as a modality for treatment of various types of headache and facial pain.^[1,2] Here, we report a patient with postdural puncture headache (PDPH) who showed rapid symptomatic improvement after single sitting of sphenopalatine ganglion block.

Patient was 37-year-old male, who underwent open reduction and internal fixation of femur under spinal anaesthesia. Spinal anaesthesia was given with 25G Quincke spinal needle at L3–L4 interspinal space with inj. bupivacaine 0.5% 3.0 ml

and inj. fentanyl 25 µg. On second postoperative day, patient had headache that was severe and aggravated by movement. After detailed examination, a diagnosis of PDPH was made. Movement of head was restricted and inj. diclofenac 1 mg/kg IV twice a day and inj. paracetamol 15 mg/kg IV four times a day were started. Normal saline infusion was started at the rate of 2 ml/kg/h.

However, next day, patient had a little improvement of symptoms and was agitated. At that time, sphenopalatine ganglion block was suggested to the patient. After obtaining a written consent, patient was made to lie supine with head slightly extended. A thin soft 16G epidural catheter was sequentially inserted into each nostril of the patient and guided above the inferior turbinate (only visible turbinate), to reach the nasal passage anterior to middle turbinate [Figure 1]. The outer end of the catheter was then connected to a 2 ml syringe containing 0.5% ropivacaine. About 0.5 ml of drug



Figure 1: Intranasal insertion of 16G epidural catheter

was injected into each nostril with patient performing deep inhalation simultaneously, to facilitate the spread of drug over the mucosa above the entire middle turbinate. Around 20–30 min after the intranasal injection, patient described significant relief of symptoms of headache. Next day patient had no headache and was able to sit and eat. Patient was kept under observation for 4–5 days afterwards but did not complain of any headache.

Anatomically sphenopalatine ganglion is located in the pterygopalatine fossa posterior to middle turbinate, covered only by a 1–1.5 mm thick layer of mucus membrane and connective tissue, which makes topical application of local anaesthetic effective.^[3] The continuous ongoing loss of cerebrospinal fluid (CSF) after dural puncture results in cerebral vasodilation and uncontrolled vasodilation resulting in headache. Sphenopalatine ganglion block, by inhibiting the parasympathetic activity addresses this uncontrolled vasodilation producing symptomatic relief.^[4] Block is generally safe, however, some patients may experience bitter taste in mouth due to local anesthetic dribbling into nasopharynx. Occasionally epistaxis or light headedness may occur.

In conclusion, sphenopalatine ganglion block using intranasal topical local anesthetic can be an effective modality for achieving a rapid pain control in patients with postdural puncture headache, however this modality needs well controlled randomized trials before it can recommended as a standard of care in PDPH.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other

clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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