

Intranasal lignocaine spray for sphenopalatine ganglion block for postdural puncture headache

Sir,

Sphenopalatine ganglion block for the treatment of postdural puncture headache is a technique that has been found to be safe and effective.^[1,2] The utility of this noninvasive technique has been established in the emergency department^[3] and in outpatient setting^[4] also for various types of headaches. The usual technique of performing this block is to keep the patient in the supine position and inserting an applicator in the nose with a cotton swab soaked with 2%–4% lignocaine or viscous lignocaine.^[5] The swab stays near the posterior pharyngeal wall superior to the middle turbinate and is removed after 10 min. The same process is repeated in the other nostril. The swab does not come in direct contact with the ganglion and the local anesthetic penetrates the ganglion facilitated by the connective tissue and mucous membrane.^[5]

We have been using a modification of the above-described technique in our patients which we would like to share with the readership. As the ganglion is known to be blocked by the surface application of lignocaine, we hypothesized that lignocaine nasal spray should also be effective in achieving this goal. A syringe-based device using a microcatheter for sphenopalatine ganglion block using local anesthetic spray has been described.^[3]

When a patient is referred with complaints of postdural puncture headache (PDPH), we first examine the patient to confirm the diagnosis based on clinical examination. Anterior rhinoscopy is performed to rule out any obvious pathology such as ulcer, sore, or polyp in the nose. After obtaining a written informed consent, the process is explained to the patients. Pain score is noted on the visual analog scale (VAS). Any accompanying complaints such as photophobia, dizziness, nausea, or vomiting are also recorded. The patients are placed supine with an extended head facilitated with a pillow below the shoulders. Routine monitoring in the form of electrocardiography, noninvasive arterial pressure, and pulse oximetry are instituted and baseline values are noted. The patients are asked to take a deep breath and hold it and exhale after we signal to do so. As they take a full breath, at the height of inspiration, two puffs of lignocaine 10% are administered into one nostril aimed slightly medially and inferiorly. They are advised to keep their eyes closed while the spray is administered in their nostrils. The patients are signaled to exhale after a few seconds. The spray may cause a little nasal irritation and discomfort transiently. After the

patient settles down, the same process is repeated through the other nostril. The whole process does not take >5 min as generally the patients cooperate well.

The patients are allowed to stay supine and after 30 min they are asked to gradually sit up. VAS scoring is repeated and the patients are asked about the associated symptoms if they were present before the procedure. If there is no pain relief after 1 h of nasal spray, the process is repeated. The patients are kept under observation for 24 h and then allowed to be discharged from the hospital.

In 18 months, we have managed 11 adult patients with PDPH following spinal anesthesia for urological procedures or lower segment cesarean section, administered in sitting position with 25-gauge Quincke needle. Ethical clearance from departmental research committee was obtained for the same. There were six males and five females, with a mean age of 35 ± 8 years and body weight of 64 ± 5 kg. Eight of these patients had reported an onset of pain on the 2nd and the rest on the 3rd postoperative day. Five of them complained of associated nausea or vomiting and three complained of photophobia. The median VAS score recorded was 9 before the administration of lignocaine nasal spray.

Six patients reported complete relief (VAS 0 or 1) and were advised paracetamol orally if pain reappeared. They remained symptom free after 24 h and did not require other intervention. In five patients, the procedure had to be repeated after 1 h (VAS 4 or 5). In three patients, there was no pain relief even after a repeat administration of lignocaine spray. They were prescribed oral paracetamol 1 g 6 hourly and were asked to take plenty of fluids orally. Their symptoms resolved after 3 days. Hence, the overall success rate was 72% by this method.

A total of 40 mg lignocaine (10 mg/puff) is administered that is well within the safe dosage limits and still leaves scope for a repeat administration. The patients are administered the puff at the height of inspiration and asked to hold their breaths for a few seconds. This provides time to the drug to settle on the nasal mucosa. As the patient exhales, any residual drug in the nasal passage that is yet to settle down is exhaled out rather than being inhaled in, avoiding unnecessary anesthesia beyond the nasal passage. Pain relief is evaluated after 30 min, allowing a fair interval for topical lignocaine to act.

This technique is simple and easy and can be performed at the patient's bedside also. Prompt relief without the need for any special equipment or invasive procedure improves patient satisfaction. There is no longer the need of invasive alternatives such as epidural blood patch which has more complications and cost. There is no need to put an applicator with swab inside the nose which can potentially cause trauma or hemorrhage due to mucosal injury. Furthermore, there is no unpleasant postnasal drip of lignocaine that can happen with the application of swab on applicator. The patient or one of the family members can be taught this simple technique that can be repeated at home if the pain appears after discharge.

However, this technique is not suitable for patients with known allergy to lignocaine or any pathology in nose that is a contraindication for the use of lignocaine. Few patients did complain of transient unpleasantness after the spray but seemed satisfied with the pain relief. There is, of course, a need to validate these findings in a larger patient population.

We suggest this technique as a first-line treatment which is quick, simple, and in some cases may be diagnostic also.

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Conflicts of interest

There are no conflicts of interest.

PREKSHA DUBEY, PRAKASH K. DUBEY¹

Department of Oral and Maxillofacial Surgery, ITS Dental College, Greater Noida, Uttar Pradesh, ¹Department of Anesthesiology and Critical Care Medicine, Indira Gandhi Institute of Medical Sciences, Patna, Bihar, India

Address for correspondence:

Dr. Prakash K. Dubey,
E 3/4, Indira Gandhi Institute of Medical Sciences Campus,
Patna - 800 014, Bihar, India.
E-mail: pkdubey@hotmail.com

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