
Sphenopalatine ganglion block for abortive treatment of a migraine headache

A migraine headache is defined by the International Classification of Headache Disorders 3 criteria (IHC3) as a recurrent, debilitating primary headache disorder lasting 4-72 hours that impacts or is aggravated by daily activities. It has significant morbidity and can be debilitating. It is usually a pulsatile headache that can present with or without prodromal symptoms (“aura”) and usually extends into a period of recuperation with resolution symptoms. It is further defined as episodic or chronic based on the frequency of attacks.^[1] Migraine headaches are a global healthcare burden with about 1.04 billion suffering from migraine headaches around the world, making this the sixth most common disease worldwide.^[2] It is also the subject of ongoing research. The pathophysiology is only partially understood and new treatments are still being tested.

The current treatments for migraine headaches are divided into abortive treatment of acute migraine headache, and prophylaxis aimed at decreasing headache frequency. Acute headaches are usually treated with non-steroidal anti-inflammatory (NSAID) medications and second line treatments such as triptans (sumatriptan, ergotriptan). However, triptans are powerful vasoconstrictors with some risks and side effects. These medications are contra-indicated in patients with concurrent coronary

artery disease, pregnancy and lactation. More recently, interventional techniques have emerged in hard-to-treat cases. Two recent studies examined the application of a sphenopalatine ganglion (SPG) block with local anesthetics for migraine abortion. A 2015 randomized control trial evaluated patients with chronic migraine (CM) with six weeks (12 treatments) of SPG block with bupivacaine and found that patients had a significant reduction in pain up to 24 hours after each treatment.^[3] Another recent series of cases reported similar results with lidocaine.^[4]

Here, we report a case of a 45-year-old man with recurrent episodic migraine headaches presenting with an acute and debilitating migraine attack lasting two days that was not relieved with NSAIDs nor triptans. Having failed to respond to conventional management, an interventional approach was selected and the patient was treated with a trans-nasal SPG block with 0.25% bupivacaine. The block was performed using a 3 mL syringe attached to a 20-gauge IV catheter. The patient was asked to extend his neck during the procedure and roughly 0.5-1 mL of bupivacaine was quickly injected into each nostril. The procedure was tolerated well and no adverse effects were experienced. The patient experienced complete resolution of symptoms after 30 minutes of local anesthetic instillation and had no recurrence of symptoms noted several days later.

Migraine headaches are a common, debilitating problem with a high healthcare and societal cost. Conservative treatments are not always effective and can carry significant risks. A trans-nasal SPG is a relatively safe procedure that carries minimal risks. Emerging data suggests efficacy of SPG blocks for chronic migraines. Here, we report a case of SPG block for abortive treatment of episodic migraine. This safe and effective treatment should be considered when conservative treatment fails.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his consent for his images and other clinical information to be reported in the journal. The patient understands that name and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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