

Efficacy of Cervical Medial Branch Block in Two Patients with Refractory Occipital Neuralgia.

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ABSTRACT

Occipital neuralgia is often characterized by severe, paroxysmal and debilitating pain in the distribution of greater and lesser occipital nerve. It can cause severe refractory headache. Occipital nerve blocks have been used for long in diagnosis and treatment. We describe the efficacy of cervical medial branch block in patients with refractory occipital neuralgia. Two patients with refractory occipital neuralgia who were earlier treated with medications and occipital nerve block without much benefit were given cervical medial branch block. Visual analogue scale (VAS) score was checked for evaluation of effect of cervical medial branch block. The VAS score at 3 month after cervical medial branch block was significantly decreased compared to baseline scores in both patients. There were no major complications. Our case report suggests that cervical medial branch block can be used as a treatment modality in patients with refractory occipital neuralgia. This also suggests that cervical medial branches are important pain generators located in cervical region, could be an important source of pain in occipital neuralgia.

Keywords: Cervical medial branch block, Occipital neuralgia.

INTRODUCTION

Pain in the distribution of greater and lesser occipital nerves have been described under occipital neuralgia, often difficult to separate it from other headache. Occipital neuralgia was described as an uncommon cause of headache by Beruto and Ramos in 1821.^[1] Recently International Headache Society defined occipital neuralgia as paroxysmal, sharp pain in the distribution of lesser or greater occipital nerve with associated paraesthesia or dysesthesia in same region.^[2] Cervicogenic headache including occipital neuralgia have long been considered originating from upper cervical spine problems. Facet joints could be one of the pain generators located in cervical spine as greater occipital nerve receives contribution from dorsal rami of C3 and C4. Cervical medial branch block is frequently used in patients with chronic neck pain originating from facet joint.^[3,4] Numerous reports of occipital neuralgia have been described since its first description.^[5] We report two cases of occipital neuralgia, which were refractory to various treatment modalities. Cervical medial branch block (CMB) resulted in prolonged relief in these patients with improvement in VAS score and Quality of life over 3-month follow-up.

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CASE 1

A 52-year-old male presented to pain clinic with complaints of headache in right occipital region for past 1 year. It was continuous, aching, aggravating at times. Cervical pain was present intermittently; it was non-radiating and worsening with extension. Patient took treatment for the same over 1 year, NSAIDs, neuropathic medications even treatment for migraine has had been instituted earlier. Full clinical work-up was done with normal blood counts and electrolytes. Cervical spine radiograph showed degenerative changes with facet joint involvement on right side. Based on the history and treatment history patient was planned for cervical medial branch block of C2-3.

After obtaining informed consent, 20G IV cannula was placed. Patient was shifted to OT and diagnostic block on right side C2-3 cervical medial branch was given under C-arm guidance with 3½-inch needle. Needle is advanced till it made bony contact with lateral side of facet joints. 0.5 ml of 2% lidocaine was given after negative aspiration for blood and CSF at both levels. There was relief within minutes. 1 week later CMB was performed with 2ml Triamcinolone (40mg) with 0.25% Levobupivacaine resulting significant improvement in VAS score compared baseline (VAS-8) to post procedure (VAS-3). There were no complications. Patient was monitored for 30 minute then discharged. Follow up was done weekly for 1 month then monthly for next 3 month revealed significant pain relief.

CASE 2

A 36 yr old female presented to pain clinic with complaints of severe right side occipital headache for 8 months duration. Pain continuous, shooting, aggravating on flexion and extension of neck. Tenderness was present on deep palpation over facet joints. Cervical radiograph showed degenerative changes. History was negative for migraine and eliminating other possible cause of cervicogenic headache, patient was offered cervical medial branch block of C2-3 after pain relief was obtained with diagnostic block with 0.5 ml of 2% lidocaine. After full work up, informed consent and aseptic precaution, IV cannula was placed. C2-3 medial branch block was given under C-arm guidance using 3½-inch needle with 2ml Triamcinolone (40mg) and 0.25% Levo bupivacaine. Significant improvement of VAS score, baseline (VAS-9) to post procedure (VAS-2). Regular follow up showed prominent improvement in VAS over 3 month.

DISCUSSION

Occipital neuralgia is often characterized by constant, paroxysmal, throbbing, burning or aching pain in lesser and greater occipital nerve distribution. Pain may be unilateral or bilateral, worsening with extension and rotation of neck. Pain can also be present over face, temple or neck.^[6] Distinguishing occipital neuralgia from other form of headache is difficult and may require diagnostic block with local anesthetics.

Causes of Occipital neuralgia include degenerative cervical discs, trauma to greater or lesser occipital nerves, compression of nerves and localized infections. Cervical spine changes include spondylosis, arthritis of upper cervical facet joints and thickening of ligaments in that area and thickening of ligaments in that area.^[7]

Greater occipital nerve is medial branch of dorsal rami of 2nd cervical nerve. It travel along with the lesser occipital nerve, under obliquus capitis muscle, then passes through trapezius to innervate posterior part of scalp (occipital region). Cervical medial branches are the dorsal rami that supply the facet joints between two vertebrae. The medial branch nerve both above and below supplies each facet joint.

Differential diagnosis of occipital headache include migraine, tension headache, cluster headache and cervicogenic headache. Proper history and physical and neurological work up should be done before coming to final diagnosis. CT and MRI should be indicated based on the clinical diagnosis and also to eliminate the idiopathic cause of occipital neuralgia. Systemic diseases should be evaluated like diabetes may result in neuropathies; rheumatoid arthritis may result in changes in spine.

Treatment option are based patient profile include conservative (physiotherapy, massage therapy, heat therapy); medication (Neuropathic drugs, NSAIDs, may be opioids); nerve blocks (greater or lesser occipital nerve blocks); cervical nerve blocks; radiofrequency nerve ablation is also frequently used following benefit of medial nerve blocks with local anesthetic. Newer techniques like nerve stimulators have also shown benefit in patients where other treatment modalities have failed.

In our patients based on the history, clinical and radiological evidence it seems prudent to institute early cervical medial nerve block, as they are common pain generator located in cervical region often causing sharp occipital pain.

CONCLUSION

Occipital neuralgia is complex to define on diagnostic terms, typically there is no specific structural cause for pain in occipital neuralgia, and proper history and examination is requisite to enable diagnosis and treatment. Occipital pain with cervical pain should raise suspicion towards cervical cause of occipital neuralgia. We feel interruption of neural excitation pathway by cervical medial branch block, lead to the resolution occipital neuralgia in our patient. Cervical medial branch nerve block with local anesthetic and steroid should be considered in occipital neuralgia, as a therapeutic measure when other preliminary treatment modalities fail as our case report indicates.

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