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INTERVENTIONAL PAIN PROCEDURE FOR NEUROPATHIC PAIN CAUSED BY HERPES ZOSTER INFECTION OF MANDIBULAR DIVISION OF TRIGEMINAL NERVE

ABSTRACT

A 55 years female presented to Pain OPD with complaints of vesicular eruption in left side of lower half of face, buccal mucosa, ear, lateral aspect of tongue followed by severe excruciating pain which was pricking, burning type with pins and needle sensation. Pain had disturbed her eating, sleeping and social life. She was suffering from rare diagnosis of Herpetic neuralgia involving left mandibular division of trigeminal nerve. Her pain did not subside with any of oral medications like Gabapentin, Amitriptyline, Tramadol or injectable Ibuprofen. Left sided mandibular nerve block with local anesthetic and steroid lowered the severity of pain. Later, patient had severe itching in ear and discomfort sensation in chin which was relieved by auriculotemporal nerve and mental nerve block with combination of local anesthetic and steroid. A week the block, patient was symptomatically improved and well satisfied.

Keywords: Auriculotemporal, Herpetic neuralgia, Mandibular, Mental, Nerve block,

INTRODUCTION

Herpes Zoster (HZ) is an acute, localized self-limiting infection caused by the Varicella Zoster Virus (VZV). Elderly or immunocompromised persons are mostly affected.^{1,2} The pain of the acute phase of HZ is caused by VZV induced cytopathic damage to nerve cells in the sensory ganglia and in the peripheral sensory nerves during the descent of the reactivated VZV. About 10 to 15% of persons with HZ will develop Post Herpetic Neuralgia (PHN). This is uncommon under the age of 40 years, but in person more than 60 years, it occurs in more than 50%.³ PHN resolves spontaneously over weeks or months but sometimes, the pain may persist longer. Rarely patient may have PHN months or even years after the initial episode of HZ. The more intense the mucocutaneous eruptions of HZ and the herpetic neuritic pain during the acute phase, the greater is the frequency and intensity of the PHN.²

CASE REPORT

A 55 years old female presented to our Pain OPD with complaints of severe excruciating pain in left jaw, cheek and ear, radiating behind the ear and neck for 1 month. Pain was severe and she was unable to eat, drink and wash face. Because of excruciating pain she had not slept for many

days. She was so much disturbed by pain and sleep deprivation that she felt disoriented with environment. Pain was pricking, pins and needle type with severe burning sensation. According to her, initially few vesicles appeared over her left side of chin, lower jaw, mucosa of left cheek, tongue which were in healing phase at the time of presentation. Black marking of those lesions were seen. Once the lesion started healing, she felt pain which kept on increasing in severity. She had taken one course of Tab. Acyclovir. She had taken Gabapentin 300mg twice daily and Amitriptyline 25 mg at bed time and had also taken Ibuprofen and Tramadol. But none of the medications reduced pain. On examination, patient was in severe pain, restless, anxious, had difficulty in concentration and socially withdrawn. She had few healed black lesions over the affected areas. Those areas were very sensitive even to light touch. She did not give any other significant past history.

Diagnosis of acute severe herpetic neuralgia with involvement of left mandibular branch was made. We did left mandibular nerve block with combination of local anesthetics and steroid via coronoid approach. Immediate effect of block was checked. She was prescribed Gabapentin 300 mg three times per day and Amitriptyline 25

mg at bed time. On follow up after a week, pain had reduced to Numerical Rating Scale score of 2-3. She was able to eat soft food, drink liquid and slept few hours at night, which was a great relief for her. She was happy as pain subsided. However, she had disturbing intermittent itching sensation over her chin and in the left ear. She also felt numbness on left side of tongue. For these symptoms, left mental nerve and left auriculotemporal nerve block was performed with steroid and local anesthetic combination. Her itching reduced by about 80% in a week time. With symptomatic improvement, Amitriptyline was stopped and gabapentin 300mg was reduced to two times per day. After one and half month she was able to eat, drink and sleep well. But, she was still scared to chew hard food with fear that same severe pain might get triggered. Though she had symptom over tongue, she did not want any intervention procedure for it.

DISCUSSION:

Herpes zoster infection may affect any sensory ganglia and its cutaneous nerve. Commonly T3-L2 dermatome is affected. In about 13% of patients, any of the three branches of the trigeminal nerve are affected. Among them, commonly affected is the first division of the trigeminal nerve, whereas the second and the third divisions are rarely involved. Post herpetic neuralgic pain is characterized by allodynia and hyperalgesia in response to non noxious mechanical and thermal stimuli and sometimes spontaneous pain. It is described as burning, sharp, shooting pain associated with itching.⁴ Fatigue, anorexia, weight loss, insomnia, reduced physical activity, depression, anxiety, and a decrease in social contacts are commonly associated with PHN.

Early initiation of therapy using antiviral agents, Corticosteroids and Tricyclic Antidepressants, Paravertebral Nerve blocks, Sympathetic Nerve blocks lessen the neural damage and severity of postherpetic neuralgia.⁵

PHN may persist for months to years and it is difficult to treat. No single best treatment has

been identified. Tricyclic antidepressants (TCAs), Gabapentin, and Pregabalin are the first line treatment for PHN.^{4,6} Opioids and topical Capsaicin patch or cream are used as second- or third-line treatment options.⁷ Lapolla et al. also stated when Gabapentin was combined with Acyclovir in treating the acute Herpetic Zoster, there was reduction in the rate of PHN.⁸ At each visit, pain severity, frequency and the patient's ability to perform daily activities should be reassessed. Combination of drugs with different mechanisms of action is preferred.⁹ When Herpetic Neuralgia affected area corresponds to any nerve dermatome (like mandibular, auriculotemporal, maxillary), blocking the particular nerve relieves the herpetic neuropathic pain.^{10,11}

CONCLUSION:

Herpes Zoster infection can lead to PHN. Post herpetic neuralgic pain can be so severe that patient will not be able to drink, eat, sleep and can suffer from anxiety, depression, and decrease social contact. For them control of pain is very important. Occasionally, oral medication may not be able to control pain. In those cases selective nerve block will be an appropriate pain relieving treatment leading to better outcomes.

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