

## Management Of Trigeminal Neuralgia To Evaluate Peripheral Inferior Alveolar Nerve Neurectomy With Placement Of Stainless Steel Screw: A Case Report

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### Abstract

Trigeminal neuralgia (TN) is sudden, severe, brief, stabbing, and recurrent paroxysmal pain. Trigeminal neuralgia if failure of the medicinal treatment, peripheral neurectomy is oldest surgical procedure.

**Objective-** The aim is the management of TN following peripheral neurectomy.

**Keywords:** Trigeminal Neuralgia; Carbamazepine; Gabapentin; Peripheral Neurectomy

### Introduction

**Case Report:** - A 45-year-old female patient presented with a main complaint of severe, sharp, piercing intermittent electrical shock like pain on the left side of face. No pathology was detected during the intra and extra oral examination. On general examination patient was normal ectomorph built and well-nourished and was well oriented to time, place and person there were no sign of jaundice and clubbing all the vital signs temperature pulse rate respiratory rate and blood pressure were normal.

All necessary investigations including pre surgical blood investigations, CT head and face were carried out. After complete evaluation of reports surgery was planned and everything was explained to the patients.

### Surgical Procedure:-

Patient was laid on the maxillofacial chair in semi supine position. Intraoral and extra oral preparation

was done. Intra oral diagnostic nerve block was given. Local anesthesia was administered. Inverted Y SHAPE incision was made (GINWALA APPROACH). Exposure of inferior alveolar nerve was done by incision which was made along the anterior border of ascending ramus which was deepened on its medial aspect by blunt and sharp dissection. The temporalis and medial pterygoid muscle were split and the nerve was located and clamped and then get cut by the instrument. Window was closed using SS screw. Flap was closed using 3.0 vicryl. Betadine dressing was given. Post-surgical medication was advised. Follow up was done on regular interval. Pain was subsided and patient was satisfied with the treatment.

### Review Of Literature:-

Classical trigeminal neuralgia (TN) is a rare neuropathic pain. The pain, also known as “tic douloureux”, is paroxysmic and very severe. It can be triggered by a light coetaneous stimulus on a very localized spot on the face (the so called “trigger zone”). The patient can sometimes benefit from long remissions without any treatment. With the exception of multiple sclerosis and of uncommon cases of posterior fossa tumors or other lesions impinging on the trigeminal nerve, ganglion or root, trigeminal neuralgia is considered as “idiopathic”. Both medical and surgical modalities exist in the treatment of patients with TN. Carbamazepine still remains as the gold standard drug in terms of efficacy in TN. Several other drugs can be used as alternatives for TN such as oxcarbazepine, baclofen, lamotrigine, levetiracetam, gabapentin, valproate, and botulinum toxin A injection.<sup>1</sup>

Trigeminal Neuralgia is classified as follows: Classic (also known as primary or idiopathic) and Symptomatic (or secondary) - Due to intrinsic brainstem pathology with trigeminal nerve, nuclei, or tract involvement (e.g., multiple sclerosis or lacunars infarction), or due to extrinsic cerebellopontine angle pathology (e.g., neoplasm or vascular lesions). Most TN patients (>85%) have classic TN. Diagnosis in typical cases is often straightforward; however, most TN patients suffer from misdiagnosis.<sup>1,2</sup>

#### Epidemiology:-

Few data are available. Incidence rate are 3 to 5 cases/year/100000 persons. Prevalence has been estimated 107.5 men and 200.2 women/ 1 million populations.<sup>3-6</sup>

#### Clinical Features:-

- Character – shooting, sharp, stabbing
- Site/radiation- trigeminal distribution only intraoral and extra oral
- Severity – moderate to severe
- Duration 1-60 seconds, sometime more
- Periodicity – light touch, washing face, brushing teeth, shaving applying makeup, going out in cold

#### Investigation:-

Patient history is the most useful tools for diagnosing of classical Trigeminal Neuralgia. Recent advanced neuroimaging has ability to diagnose symptomatic TN. sometimes advance imaging advised for the evaluation of tumor or any other pathology.

#### Treatment:-

Carbamazepine (CBZ) remains the drug of choice. Treatment begins with 100mg to 200 mg or three times a day. Maximum dose is 200 mg to 1200 mg per day in divided dosage can be given. Doses should be increased very progressively and titrated to the severity of the patient’s pain. In some cases a maintenance dosage of 200 mg or 400 mg per day is sufficient. Gabapentin can be also used. The maximum dose is 1200 mg to 3600 mg daily in divided dosage.<sup>1</sup> Other drugs like pregablin can be also used. Multivitamins like vit E, B5, B12 and C are also used with these drugs. If medications not provide satisfactory response then surgery can be advised.

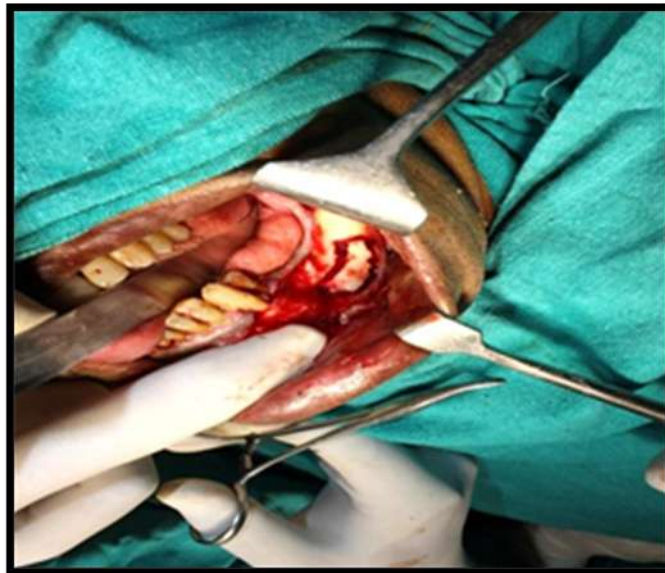
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**Fig 1:- Intra Oral Diagnostic Nerve block**



**Fig 2:- SURGICAL PROCEDURE**



**Fig 3:- Incision**



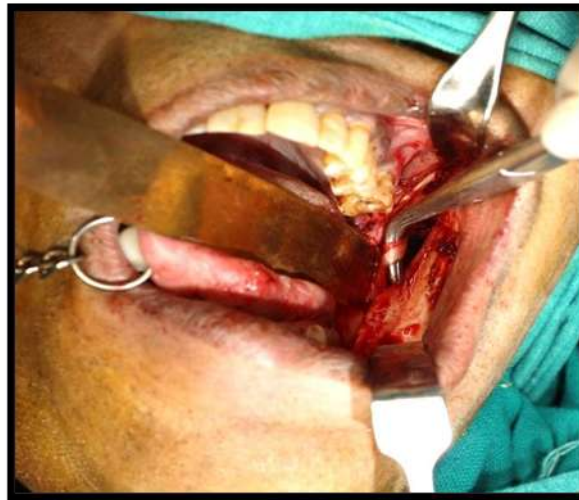
**Fig 4:- Exposure of the site**



**Fig 4:- Identification of Inferior alveolar Nerve**



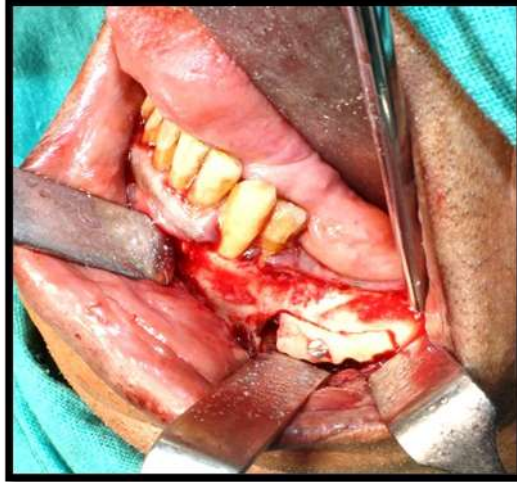
**Fig 5:- Osteotomy Cut to expose Inferior alveolar Nerve**



**Fig 6:- Neurectomy Done**



**Fig 7:- Internal Fixation Done**



**Fig 7:- CLOSURE DONE**

