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Diagnosis and Treatment of Trigeminal Neuralgia Co Existing With Bacterial Parotiditis.

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ABSTRACT:- Trigeminal neuralgia also known as 'tic douloureux'or 'Fothergill's disease' is a disease presenting severe pain which is paroxystic and can be triggered by a mild cutaneous stimulus on the face or trigger zone. This disease has various etiology and clinical presentation. We present a case of trigeminal neuralgia of the maxillary division that occurred almost simultaneously with unilateral bacterial parotiditis.

Keywords–trigeminal neuralgia, bacterial parotiditis, carbamezipine

I. INTRODUCTION

Trigeminal nerve is largest cranial nerve and has three branches: the ophthalmic nerve (V1), the maxillary nerve (V2) and the mandibular nerve (V3). Kugelberg and Lindblom in 1959 stated trigeminal neuralgia is characterized by brief paroxysms of pain, limited to the facial distribution of the trigeminal nerve and precipitated by stimuli to sensory endings in the trigeminal receptive area[1]. The patient can sometimes benefit from long remissions without any treatment. Trigeminal neuralgia can be called 'idiopathic' with the exception of multiple sclerosis and of uncommon cases of posterior fossa tumours or other lesions impinging on the trigeminal nerve, ganglion or root. Some benign abnormality has also been suspected as etiology[2]. The current opinion is now in favour of a "neurovascular conflict" i.e. an artery, most often a loop of the superior or anteroinferior cerebellar artery, has an offending contact with the trigeminal nerve root, which results in localized demyelination and ectopic triggering of neuronal discharges. This hypothesis is in agreement with the relief provided by antiepileptic drugs and is supported by recent neuroimaging data[2].

II. CASE REPORT

A patient age 38/M reported to our department with the chief complaint of severe pricking type of pain since 20 days and swelling on the left side of the face since 5 days. Pain was intermittent and aggravated on consumption of food, especially sour one. It lasted for 3-5 minutes and subsided on its own. Patient described this pain as severe, unbearable, intermittent, shock like and unilateral.He had referred pain to left ear. He took analgesic for 20 days but no relief was gained, instead the episodes of pain increased. He revealed history of application of balm over the left cheek and swelling of face since then. Patient had reported his condition to ENT department but no associated abnormality was found with ear throat and nose. On examination a diffuse tender swelling over the left parotid region was noticed. On palpation intense episode of pain was aggravated on touching to left malar region. Intraoral examination revealed erythema over left stenson duct along with purulent discharge through it on milking. Clinically no odontogenic abnormality was seen. On USG on left parotid gland appeared to be enlarged, showing diffuse vascularity but no area of calcification which was suggestive of parotiditis.

Based on clinical and USG finding unilateral bacterial parotiditis and trigeminal neuralgia of maxillary branch was given as provisional diagnosis. Patient was given amoxicillin clavulinic acid (625 mg), aceclofenac (100 mg) and ranitidine(150 mg) for 5 days along with carbamazepine 200 mg daily dose and recalled after 5 days.On recall visit the patient had complete relief of his parotiditis symptoms, USG also showed normal parotid glands. However, frequency and intensity of pain episodes had increased. Therefore the dose was increased to 800 mg over a period of 2 months and pain relief was 50%.

Patient was given left posterior superior alveolar and infra orbital nerve block for scaling. No episode of pain was elicited during the procedure which was further confirming the diagnosis of trigeminal neuralgia. An MRI scan was performed which reported single vascular loop in close contact with the trigeminal nerve but did not

appear to be encircling the nerve. Gabapentine 150 mg was added to 400 mg daily dose of carbamazepine. Patient did not have complete relief after this medication. A psychological counseling was advised because of the high of anxiety of the patient. Keeping in mind the diagnosis of trigeminal neuralgia and anxiety he was advised multi drug therapy of carabamezapine 400 mg, gabapentine 150 mg, nortriptyline 25 mg, clonazepam 0.25 mg. Patient is on this medication since 6 months and has complete relief.

III. DISCUSSION

Trigeminal neuralgia (TN) is defined by the International Headache Society (IHS) as ‘‘unilateral disorder characterized by brief electric shock-like pains, abrupt in onset and termination, and limited to the distribution of one or more divisions of the trigeminal nerve’’[3].Trigeminal neuralgia has been classified based on etiology by IHS into classical and symptomatic TN. Classical is caused by vascular compression of the nerve and the superior cerebellar artery is most often responsible for neurovascular compression on the trigeminal nerve, although other arteries or veins may also be responsible. Symptomatic TN has the same clinical criteria, but another underlying cause except vascular compression is responsible for the symptoms. Based on the symptoms TN is classified as typical trigeminal neuralgia (Tic Douloureux) which is the most common type of trigeminal neuralgia and presents with minor aching or burning pain within the affected distribution of the trigeminal nerve. Atypical trigeminal neuralgia is characterized by a unilateral, continuous and severe aching or burning pain. Both these types of pain can occur in the same patient, it can share the same time also.[1]

Thus, diagnosis of TN is usually easy. Our patient had higher anxiety level and the symptoms of parotiditis overlapped the symptoms of TN. Thus, the diagnosis of TN became difficult. However once the symptoms of parotiditis subsided an adequate approach towards treatment of TN was possible.

Trigeminal neuralgia is treated mainly by pharmacological methods. Other treatment modalities include TENS, acupuncture, psychological methods and surgery. Medical management of TN is mainly with anticonvulsants and skeletal muscle relaxants. Carbamazepine (tegretol) is the initial choice for the treatment of TN. If the symptoms doesn’t subside other drugs like baclofen or phenytoin, sodium valproate, gabapentin, lamotrigine, and clonazepam are usually added. The surgical management of trigeminal neuralgia is the last resort and preferred only when the medical management does not provide relief for the patient. The surgical management includes the procedures like Microvascular decompression, Glycerol gangliolysis, Radiofrequency gangiolysis, Balloon compression, Stereotactic radiosurgery, peripheral neurectomy, Cyber knife etc[4].

In our patient the initial line of treatment was carbamazipine and later gabapentine was added to it. As he was overly worried about his condition, it was disturbing his life to a great extent. The psychiatric management, which used a multi-drug approach (carbamazepine, gabapentine, nortryptyline and clonazepam) helped him to resolve his anxiety and manage his symptoms related to TN and a complete relief was obtained within the period of 6 months.

IV. CONCLUSION

Trigeminal neuralgia is an uncommon disease and may adversely affect the life-style of a patient because of the severity and intensity of the pain the patient experiences. Any rational approach to diagnosis and effective treatment in TN should be based on the identification of underlying pathophysiology producing the disorder. Even though various drugs have been used in the treatment of TN carbamazepine is the gold standard in the initial treatment. However in recalcitrant cases, a physician should not hesitate to use adequately tested modalities of medical therapy as elevation of patient’s suffering is the primary concern in these cases.

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