ORIGINAL ARTICLE

Unilateral Facial Neuralgia A management Dilemma

MUHAMMAD SAID, MUMTAZ ALI, ALAMGIR KHAN
Department of ENT and Neurosurgery, PGMI LRH, Peshawar – Pakistan

ABSTRACT

Objective: *The objective of the study was to assess the significance of clinical examination in Diagnosis and management of Patient with unilateral facial neuralgia.*

Study Design: *Observational study.*

Place and Duration of study: *Out patient clinic and department of ENT and Neurosurgery PGMI LRH Peshawar from IST Nov 2005---31 Oct 2007 (2 years).*

Material and methods: *Patients presented with unilateral facial neuralgia were assessed in out patient clinic, record keeping about data was assessed during compiling of study. Related investigations were performed to exclude secondary causes of neuralgia.*

Results: *A total of 1207 patients who presented with unilateral facial pain in two years duration were scrutinized for idiopathic facial neuralgia. 182 (15.07%.) patient were referred to neurosurgeon who were suffering from trigeminal neuralgia.43(3.56)%) patient were subjected to microvascular decompression (MVD).Rest of the patients were treated accordingly.*

Key Words: *Unilateral facial pain, trigeminal neuralgia, Microvascular decompression.*

INTRODUCTION

Facial neuralgia is often sudden, lancinating pain that is unilateral and limited to the vicinity of affected cranial nerve.[1] Trigment neuralgia, Glarespharyngeal neuralgia and other inter mediate neuralgias can present either super facial or deep pain out of which trigeminal neuralgia is the most common in clinical practice other causes of unilateral pain in emergency and out patient sitting may be of sinogenic or non-sinogenic causes like, frontal, maxillary ethmoid and sphenoid sinusitis (acute or chronic) sinus mcuocle, cranio mandibular due to tempo-mandibular joint disorders, perio- dental disorders, otitis externa, skull base tumors, orbital pathologies, neurological disorders like painful neuralgia, due to vascular malformations ,brain tumor and psychiatric causes make the remaining categories. Most sinonasal pain is referred and is deep, aching, and usually nonpulsatile. The location of pain can help to localize which sinus may be particularly involved[2].patients with facial pain secondary to acute sinusitis have coexisting symptoms such as nasal obstruction, hyposmia, or purulent nasal discharge.[3,4]

Facial pain of dental origin is often caused by caries that progress to infection of the pulp or apical abscess.[5]

The trigeminal system is the main source of sensory innervations of the face. The 7th, 9th and 10th cranial nerves also contain somatosensory pain fibers that synapse with trigeminal pain axon.[6] Any disorder irritating or affecting the nerve directly or indirectly give rise to facial pain. Idiopathetic facial neuralgia can be diagnosed purely on properly detailed history and clinical examination particularly triggering the pain by minimal stimulation of the affected area (Trigger zone).[7]

Haematological and Radiological investigation are needed to exclude secondary causes:

Surgical micro vascular decompression (MVD) and the use of gamma knife radiations are non ablative treatment options which has shown excellent results in these cases.[8]

MATERIAL AND METHODS

This Study was carried out randomly in patient presented unilateral facial pain in out patient department of both department of PGMI LRH .This is a tertiary care hospital which provides specialized treatment to the people of frontier province as well as patient coming from Afghanistan boarder .All patient presented with unilateral facial pain were examined in detail. After detailed record and documentation.

Duration, quality, location, excruciating and reliving factors were recorded to exclude secondary causes of facial pain, like orbital, sino nasal, dental and ontological disorders. A written Performa includeing cardinal features of the diseases was design and filled for documentation purposes. Related hematological investigations like, FBC, ESR and blood sugar were done in patient suffering from infection disorders temporal arthritis and herpes zoster. Plain x-rays in form of PNS and OGP were done, in Patients suffering from Sino- nasal and ore dental pathologies. CT scan and MRI was advised in individualized cases presented with skull base lesions like local infections skull base tumors ,cranial disorders were also supplemented by neuro imaging studies in consultation neurosurgeon. Pediatric patients, facial pains, patients with trauma and patient with previous history of lesional surgery were excluded.

Resistant cases of trigeminal neuralgia were subjected to non ablative procedure (MVD) by neurosurgical collogues. Pre operative and post operative out come was assisted by neurosurgical team and document record was discussed during compiling the cases.

RESULTS

A total of 1207 patients who presented with unilateral facial pain in two years duration were scrutinized for idiopathic facial neuralgia. 182 (15.07%) patients out of 1207, were suffering from idiopathic facial pain due to primary trigeminal neuralgia the other causes of unilateral facial pain, the remaining patient were suffering from sinusitis 300 (24.85%), dental pathology 200 (16.57%), temporomandibular joint disorder 100 (8.28%), otitis externa 100 (8.28%), herpes zoster 25 (2.07%), Sino nasal tumors 150 (12.42%), intracranial tumors (Para seller and Para cavernous)[6], orbital pathology 100 (8.28%) ,trigeminal neuroma 2 (0.16%), cerebello potine angle tumors 14 (1.15%), Arnold chiary malformation 2 (0.16%) temporal arteritis 2 (0.16%), petroclival meningioma 3 (0.24%), Intra cranial fungal granuloma 4 (0.33%), Para seller brain abscess 1 (0.08%), trigeminal schwanoma 3 (0.24%), cavernous meningioma 2 (0.16%), orbital causes include hydated cyst 2 (0.16%), mucocele 2 (0.16%), extra ocular metastatic deposits 5 (0.14%), orbital meningioma 2 (0.16%) and fibrous dysplasia 2 (0.16%).

182 (15.07%) cases were referred to neurosurgical colleagues. Their age range was 28—85 years only 43 (3.56%) patients were subjected to micro vascular decompression (MVD) considering positive prognostic factors regarding surgical outcome. Hence right side was involved in 27cases and left side in 16cases.32 were female while 11 patients were male with F: M ratio 3:1 .There age range was from 35—65 years .VI branch was involved in 4 cases maxillary V2 in 2 cases, mandibular V3 in 15 cases while mix branch involvement in 3 cases .CT/MRI were unremarkable in all these cases per operative SCA was compressive element in 33% patient .AICA in 7% cases, BA in 1% case and thick arachnoids adhesion in 2 cases. No venous compresses was noted .2 patients developed temporary CSF leakage, 1 patient ostomyclitis of the skull and 1 patient facial paresis. Transient head ache vertigo and vomiting were common post operatively in the first 5 days of surgery in 16, 9 and 3 cases respectively.41 patients were pain free within 24 hours after surgery, 1 patient was symptomatic up to 10 days. 1 patient developed brain odema and expired.

DISCUSSION

Neuralgia is a paroxysm of lancinating pain along the distribution of nerve .This sensation is in contrast to the constant dull ache of sinusitis .In trigeminal neuralgia paroxysmal pain disturbance in which pain is felt in the distribution of one or more division of the trigeminal nerve. Paroxysm of pain is usually triggered by sensory stimulus and each attack lasts only a second. Multiple sclerosis, cerebella potine angle tumors. Schwannomas and other local lesions accounts for some causes, and a vascular compression can cause exacerbation and remission. Carbamazipine is the most effective drug for the treatment of trigeminal neuralgia. Surgical management options include alcohol block of the involved division of trigeminal nerve, per cutaneous radio frequency thrombogoagulation of the trigeminal sensory root as it exist the gasserian ganglion and micro vascular decompression of the nerve roots.[9]

Idiopathic trigeminal neuralgia is caused by a neurovascular conflict. Inspite of the popularity of the

concept of micro vascular conflict, the issue of the aetiology of idiopathic trigeminal neuralgia is still a matter of great debate. That is why different treatment options are advocated by different people. The pain of trigeminal neuralgia is typically brought on by a physical stimulus applied to the affected area of face. There can be very highly sensitive point which when touched precipitates the pain called the trigger point. The presence of trigger point is of clinical importance because of its relationship to significant compression on the nerve and good post operative outcome.[10]

SUMMARY/CONCLUSION

From this study we concluded that facial pain is a common complaint in ENT and Neurosurgery practice. A list of secondary causes should be excluded while labeling a patients as Trigeminal Neuralgia.

Non ablative surgical procedures like MVD is an excellent procedure and is a safe procedure in expert's hands.

Address for correspondence:
Dr. Muhammad Said
FCPS ENT.
Department of ENT and HEN.
PGMI LRH. Cell No: 03005924816

REFERENCES

1. Aguggia M, Typical facial neuralgias. Neurol Sci. May 2005; 26: 68-70.
2. Rebeiz EE, Rastani K. Sinonasal facial pain. Otolaryngology Clin North Am. Dec 2003; 36 (6): 1119-26.
3. Fahy C, Jones NS. Nasal polyposis and facial pain. Otolaryngol Allied Sci. Dec 2001; 26 (6): 510-3.
4. Hughs RG, Jones NS. The role of nasal endoscopy in outpatient management. Clin Otolaryngol Allied Sci. Jun 1998; 23 (3): 224-6.
5. Annino DJ jr, Goguen LA. Pain from the oral cavity. Otolaryngol Clin North Am. Dec 2003; 36: 1127-35.
6. Larrier D, Lee A. Anatomy of headache and facial pain. Otolaryngol Clin North Am. Dec 2003; 36: 1041-53.
7. Chavan JM. Cranial neuralgias and headaches associated with cranial vascular disorders. Otolaryngol Cli North Am. Dec 2003; 36 (6): 1079-93.
8. Kondev L, Minster A. Headache and facial pain in children and adolescents. Otolaryngol Clin North Am. Dec 2003; 36: 1153-70.
9. Essential laryngology, Head and Neck surgery by K.J LEE, Seventh edition: 345).
10. Ali M, Khan KM, Khanzada KA, Ayub S, Khan H. Significance of trigger point in trigeminal neuralgia. JPMI 2007; 21: 183-86.