ORIGINAL ARTICLE

Comparison of Carbamazepine and Peripheral Neurectomy in the Treatment of Infraorbital Neuralgia

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ABSTRACT

Objective: To compare the results of Carbamazepine and peripheral Neurectomy in treatment of infra orbital Neuralgia with respect to pain relief and side effects.
Study design: Normative comparison study.
Place and duration of study: Dental surgery department of DHQ Hospital Karak and private clinics of the authors at Kohat Khyber Pukhtoonkhwa, from January 2005 to December 2012.
Methodology: Sixty patients of clinically diagnosed Infra orbital neuralgia were included in this study. Those patients of Infra orbital neuralgia who had intracranial tumors or having previous history of Herpes zoster infection were excluded from the study. Patients were distributed into two groups, and each containing 30 patients. One group (A) was treated with Oral Carbamazepine and the other group (B) with Peripheral Neurectomies under General Anesthesia. The patients of both the groups were enrolled from January 2005 to December 2012.
Results: Twenty patients among the total 60 were referred by the general medical practitioners and 40 attended the private clinics of the authors on their own. Pain relief obtained in group (A) was excellent in16 patients(53%), good in 8 patients(27%) and 6 patients (20%) went into failure While in group B, pain relief was excellent in 26 patients(86%),good in 3 patients(10%) and only one patient (3.33%) got no pain relief. The side effects in group A were, Maximum in 20 patients(66%) , Minimum in 8 cases(27%) and Nil in 2 cases(7%), while in group B, no side effects were recorded.
Conclusion: Peripheral Neurectomy is the oldest method for treatment of infra orbital neuralgia. It is still better than carbamazepine treatment. Carbamazepine has comparatively many side effects.
Key words: Infra orbital Neuralgia, Carbamazepine, Peripheral Neurectomy

INTRODUCTION

Trigeminal Neuralgia is a severe, painful condition, characterized by sharp, shooting, excruciating episodic pain along the distribution of trigeminal nerve. It usually affects the people of middle age with females having more predilection[1.] In majority of cases (90%) the pain is unilateral and rarely there is objective sensory loss. Pain is experienced in most cases while touching the trigger point extra oral or intra orally during making ablution, shaving the face b, tooth rushing and doing lip sticking. It may significantly reduce the quality of life with profound anxiety and depression[1, 2, 3,4,5,6].

The exact etiology of trigeminal neuralgia is not known but most evidence favors demyelination of the trigeminal nerve due to its compression by either intracranial tumors or blood vessels aneurysms in the central nervous system[7].

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General medical practitioners, general dental practitioners, Oral & Maxillofacial surgeons, Neurosurgeons and many more have been treating the patients of idiopathic trigeminal neuralgia. To recognize this condition the general dental practitioner, may be the first member of the health team, because most if not always the pain of trigeminal neuralgia simulates dental pain especially when the trigger point is present inside the oral cavity. It is the dental practitioners who have to play a very important role in the early and prompt diagnosis of trigeminal neuralgia. Medical management is the first line of treatment and Carbamazepine is the drug of choice[1]. Surgical treatments in the form of peripheral neurectomy, cryotherapy, microvascular nerve root decompression, radiofrequency thermo coagulation etc are not cost effective and on the other hand equipments and experts availability is also minimum[2,4,5,6,7].Recurrence has also been noted with the surgical treatments of trigeminal neuralgia[3,5,7,8,9]. Keeping in view the known side effects of carbamazepine such as dizziness, tingling sensation, fatigue and aplastic anemia and the recurrences with surgical treatments[1,3]. The objective of the study was

to compare the results of Carbamazepine and peripheral Neurectomy in patients of infra orbital Neuralgia with respect to pain relief and side effects.

SUBJECTS AND METHODS

Sixty patients of clinically diagnosed Infra orbital neuralgia were included in this study. Those patients of Infra orbital neuralgia who had intracranial tumors or having previous history of Herpes zoster infection were excluded from the study. Patients were distributed into two groups, and each containing 30patients. One group (A) was treated by Oral Carbamazepine (tablets Tegrol 200mg three times a day) and the other group (B) was treated by Peripheral Neurectomy under General Anesthesia. A printed Performa was filled to evaluate the patients for pain relief or otherwise, using the criteria as: Excellent: Total pain relief & no other medication required. Good: Occasional pain relief or pain greatly diminished. Failure: Poor pain relief & other medication required for pain relief. Side effects of Carbamazepine were graded as; maximum: dizziness, tingling sensation, fatigue and Anemia All of the above were seen. Minimum: None of the above side effects except fatigue observed. Nil: None of the above s side effects were noted.

RESULTS

Details of results are given in tables 1 ,2 ,3

Table: 1 Demographic data of the patients (n=30)

Group A (Carbamazepine)	**Group B(Peripheral Neurectomy)**
Age in years	**Age in years**
Age range : 30 – 70	Age range : 45 – 65
Mean age: 55	Mean age : 49 years
Gender	**Gender**
Male (n=08)	Male (n= 13)
Female (n= 22) M to F ratio 1 : 2. 57	Females(n=17) M to F ratio 1 : 1. 30

Table 2: Data of patients regarding pain relief.

Group A (carbamazepine)	**=n**	**% age**	**Group B (peripheral neurectomy)**	**n**	**% age**
Excellent	16	53	Excellent	26	86.7
Good	08	27	Good	03	10
Nil	06	20	Nil	01	3.3
Total	30	100 %	Total	30	100 %

Table 3 Side effects of both groups

Group A (Carbamazepine)	**=n**	**% age**	**Group B (Peripheral Neurectomy**	**n**	**% age**
Maximum	20	66 %	Maximum	00	00
Minimum	08	27.1	Minimum	00	00
Nil	02	07.3	Nil	00	00
Total	30	100 %	Total	00	00 %

DISUSSION

Involvement of infraorbital nerve in trigeminal neuralgia and its treatment is a challenge to the general practitioners. Carbamazepine is both diagnostic and therapeutic for management of trigeminal neuralgia but its side effects and its long term treatment regimen further exhaust the patients[1,3] Regular monitoring of carbamazepine and subsequent follow up for aplastic anemia and liver damage makes the practitioners to think about surgical options for management of infraorbital neuralgiaPeripheral[5,6] .Neurectomy under general anaesthesia although is a a better option to avoid the side effects of carbamazepine when going through the results of this study. Both the medicinal and surgical options for treatment of infraorbital neuralgia make the practitioners helpless when the questions of recurrence arise. This study has encouraging results when compared with the national and inter-national research work[7,11]. Pain relief and side effects are two aspects of consideration when prescribing carbamazepine for treatment of inraorbital neuralgia. It is expected that pain relief neuralgia may not be at the cost of the patients general health. Excellent pain relief in case of infraorbital neuralgia with peripheral neurectomy under general anaesthesia is a sort of better option as compared to carbamazepine treatment. This is an agreement with some studies while other studies donot come in line with the results of this study[9,10,13,16].

CONCLUSION

Peripheral Neurectomy is the oldest method for treatment of infra orbital neuralgia. It is still better than carbamazepine treatment. Carbamazepine has comparatively many side effects.

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