Nigerian Journal of Clinical Practice
Dec. 2005: Vol. 8(2): 114 – 117.

FACIAL NEURALGIAS: ANALYSIS OF THE DIFFERENT TYPES SEEN AT LAGOS UNIVERSITY TEACHING HOSPITAL (LUTH)

***G.A.Agbelusi, *A.A.Wright, **M.A.Danesi.**
**Department of Preventive Dentistry and **Department of Medicine College of Medicine University of Lagos*

ABTRACT

Objective: To highlight the presentations, characteristics, the difficulties in diagnosis, treatment and response to treatment types of facial neuralgias seen at Lagos University Teaching Hospital.

Methods: Twelve patients with facial neuralgias diagnosed and treated in dental clinic of the Lagos University Teaching Hospital were studies. Using strict for diagnosis, patients were categorized into: trigeminal, glosspharyngeal and post herpetic neuralgias.

Results: Eight patients had trigeminal neuralgia; three patients had post –herpetic neuralgia and one patient had glossopharyeal neuralgia. In six patients with Trigeminal neuralgia, mandibular branch was affected, while in the two patients maxillary branch was affected. Six patients with Trigeminal neuralgia responded to carbamazepine alone and 2 had additional drugs. The only patients with glossepharyngeal neuralgia responded to carbamazepine. One patient with post herpetic neuralgia tested positive for HIV. All the post herpetic neuralgia responded poorly to carbamezepine.

Conclusion: Facial neuralgias are uncommon and usually present in the dental clinic. They can easily be misdiagnosed with resulting inappropriate. Correct diagnosis and treatment with carbamezepine is beneficial in majority of patients.

Key Words: Dental Center, Trigeminal Neuralgia, Glosspharyngeal Neuragia, Post- Herpetic Neuralgia

INTRODUCTION

The dental practitioner is faced with the challenges of evaluation and orofacial pain on
a on a daily basis. Some of cases may be straightforward others may not. In order to arrive at a definitive diagnosis, the practitioner makes a list differential diagnosis which he eliminates by various investigations and diagnosis tests. Unfortunately most dentists assume all oro-facial pain to be of odontogenic origin and efforts to find and treat ondntogenic sources usually lead to misdignosis an unnecessary teeth extractions without any relief for the patientss[1,2]

Several symptoms of trigeminal nerralgia may be mimicked by odontogenic pain. Trigger points for trigeminal neuralgia be intraoral and result in sharp unilateral shooting pain, which can minic acute pulpitis. The trigger is a non- painful stimulus and may include chewing or exposure to temperature change. In addition, trigeminal neruralgia may be sudden in onset. As with odotogenic pain there no known sensory abnormalities such as paraesthesia or dysethesia in the affected region[1] Many patients have had one or more teeth extracted in the areas affected by trigeminal neuralgia[1,2] Trigeminal neuralgia is relatively rare with worldwide prevalence between 1:30.000 and 1:70.000[3] Approximately 3% of patients presenting with trigeminal neuralgia have multiple sclerosis[1,4] therefore multiple sclerosis should be excluded in patients with trigeminal neuralgia particularly those under 40 years of age. Signs and symptoms of multiple sclerosis include ocular pain, visal disturbances, multiple neurologic lesions, muscular weakness and paraesthesia. Facial pain usually occurs late in the disease[4]

Glossopharygeal neuralgia is less common than trigeminal neuralgia. Paroxysmal pain of glossopharygeal neuralgia is similar to that of trigeminal neuralgia except that the distribution of the pain different and it is triggered by swallowing [4] The pain radiates from the tonsils, pharynx and anterior pillars of the fauces, through the side of the neck ear and tympanum. The tonsils act as the trigger zone.

Correspondence : Dr. G.A Agbelusi

Talking and swallowing initiate the attack. Differential diagnosis of glossoparyngeal neuralgia includes cancer of throat and tuberculosis of larynx as these diseases will have pain symptoms that radiate to the same area[1] post herpetic neuralgia is syndrome of often intractable neuropathic pain following herpes zoster that eludes effective treatment in most patients. Once established, post herpetic neuralgia may persist for many years. Elderly patients are mostly herpetic neuralgia[5] Post herpetic neuralgia is usually refractory to simple analgesic therapies and treatments including a wide variety of drugs and routes of delivery[4,6]

There are no clinical studies on facial neuralgias in Nigerians. A single case report of trigeminal neuralgia seen in Lagos University Teaching Hospital has earlier been made[2] This paper evaluated cases of facial neuralgias seen at Lagos University Teaching Hospital over a period of 2 years, describing their clinical presentations, treatment modalities response to treatment, and outcome

MATERIALS AND METHOD

The study group consisted of 12 patients of 12 patient with facial neuralgias diagnosed and treated at the oral Medicine clinic of the Lagos University Teaching Hospital between January 2000 and January 2002. One of the patients was diagnosed earlier and reported by Savage et al[2] he came for review and monitoring of hematological indices.

Dental clinic record for each patient were retrieved and the following information recorded for each of the patients: are sex, side of face affected (right or left) nerve involved trigger zone, treatment give and response to treatment

Trigeminal Neuralgia

Intermittent attacks of severe, sharp and stabbing pain along the distribution of one or more of the division of trigeminal verve that last for only seconds or minutes with complete freedom from pain between the attacks. The pain is using unilateral but may be bilateral[4]. There is a unique trigger mechanism. Stimulating the 'trigger zone' ie. Skin of the face or mucous membranes of the mouth (during washing, shaving, drinking eating or sometimes even talking or smiling) will elicit the pain. There is usually no abnormal finding on neurological examination[3] Odontogenic pain and pain from other sources were excluded

Glosopharyngeal Neuralgia

Consists of paroxysmal pain similar to trigeminal neuralgia involves the tonsil, pharynx and anterior pillar of the fauces through the side of the neck to the ear and tympanum[4]

Post – Herpetic Neuralgia

This consists of intense neuropathic pain in the areas affected by Herpes of the trigeminal ganglion that usually occurs months after crusting of the Herpes Zoster rash. The pain is burning, tearing or electric shock – like and lancinating[4]

RESULTS

There were a total of 12 patients: 6(50%) males and 6(50%) female (M:F ratio 1:1), aged between 31 and 66 years with mean age of 49.6 years Table 1 shows the pattern and the clinical presentation of the neuralgias

Trigeminal Neuralgia

Three patients (all females) showed signs of depression. 6(75%) of the 8 patients with trigeminal neuralgia responded to carbamazepine alone, one patient (12.5%) had Amitiptyline in addition to carbamzepine and one patient (12..5%) had phenytoin in addition to carbasmazepinne. Three patiens with trigeminal neuralgia (two males one female) had recurrences after treatment

Post-Herpertic Neuralgia

All the 3 cases of post herpetic neuralgia had insomnia. One of the 3 patients was severely depressed and one tested positive for HIV. All the patients responded poorly to carbamazepine alone, amitiptyline 50mg b. was added. This resulted in improvement of pain though total pain relief was not achieved. One patient had Capsaicin cream and Gabapentine, which resulted in considerable relief of pain

Glossopharyngeal Neuralgia

The patients with glossopharyngeal neuralgia responded well to carbamazepin alone.

Table 1: **Pattern of Neuralgias**

Serial No	Age	Sex	Type of Neuralgia	Site
1	31	Female	Trigeminal Neuralgia	Left mandibular
2	60	Female	Trigeminal Neuralgia	Left mandibular
3	58	Female	Trigeminal Neuralgia	Left maxillary
4	42	Female	Trigeminal Neuralgia	Right mandibular
5	53	Female	Trigeminal Neuralgia	Right mandibular
6	39	Male	Trigeminal Neuralgia	Left mandibular
7	41	Male	Trigeminal Neuralgia	Left maxillary
8	42	Male	Trigeminal Neuralgia	Right mandibular
9	38	Male	Post herpetic neuralgia	Right mandibular
10	66	Male	Post herpetic neuralgia	R maxillary, ophthalmic
11	66	Male	Post herpetic neuralgia	Right maxillary
12	60	Female	Glossopharyngeal neuralgia	Right tongue

DISCUSSION

Neuralgia is included in the definition of peripheral neuropathic pain, which is defined as pain initiated or caused by a primary lesion or dysfunction in the peripherals nervous system.[7] Patients with neuralgia of the orofacical region are likely to present first to their dentist[3] In the USA, 80% of patients with trigeminal neuralgia present first to their dentist. Observations in this study corroborate this findings, all the twelve cases seen presented to a dentist first. Two of the eight patients with trigeminal neuralgias had multiple extractions of their molars on the affected side before presentation at LUTH. This is due to wrong diagnosis and improper management. Alan et al ,[1] reported two cases of trigeminal neuralgia that were initially managed as pain of odontogenic origin. Savage et [2] al also reported a case .

Trigeminal neuralgia is generally regarded as relatively rare condition. The condition is said to have a female preponderance [1,3,7] . Finding in this study agree with this 62.5% of the patients seen were females and 37. 5% were males. The age of occurrence is put at 5^{th} – 6^{th} decade of life. [3,8] However in our study we observed that trigeminal neuralgia occurred earlier in both sexes (mean age for female is 48.8 years, males 40.6years)

Katusic et al [8] reported that the right side of the face was more frequently involved in trigeminal neuralgia than the left side even though the result was not statically significant. In this study only 3 of the 8 cases of trigeminal neuralgia involved the right side while 5 involved the left side. In this study, we noted that 6 of the 8 cases of trigeminal neuralgia involved the mandibular branch of the trigeminal nerve while only 2 involved the maxillary branch (Table 1) None of our cases involved the ophthalmic breach. This agrees with the findings of Katusic et al[8] in which mandibular and maxillary brunches were more favoured and the least was the ophthalmic branch.

Spontaneous remission and recurrence is part of the natural history of trigeminal neuralgia therefore drugs should be reduced gradually during treatment to check if patient is in remission. Three of our patients had recurrence and to resume drug treatment, therefore the natural history of the diseases should be explained to patients before commencement of treatment so that they know what to expect and would not be discouraged if recurrences occur. Anti-connvulsants are the mainstay in the management of orofacial pain of nneurologic origin[9,10] Carbamazepine is the drug of choice though occasionally some patients may require additional medication to totally abolish the pain. Phenytoin and amitriptyline can be added to carbamazepine to abolish the pain of trigeminal neuralgia. In this study, all the patients with trigeminal neuralgia and the patient with glossopharygeal neuralgia responded well to carbamazepine though two of the patients had to be given additional medication (Phenytoinn and amitiptylie) before total pain relief could be achieved.

The main side effect of carbamazpine is ataxia or drowsiness especially in the elderly; this is made worse by the concurrent use of sedatives and hypnotics[10] In elderly patients lower doses should be used to avoid these side effects which may be particularly troublesome and may make the patients to abandon treatment. The patients should also be educated on the side effects before commencement of treatment so that they will know what to expect. Side effects of long term use of phenytoin are osteomalacia; folic acid deficiency, ginigival hyperplasia with idiosyncratic reactions e.g. hepatitis[9] .

Patients with inadequate control with carbamazepine take Clonazepam (Baclofen) [11]. Newer anticonvulsant drugs are Vigabantrin with Tiagabine[10], these are currently being evaluated and are said to be promising. Post herpetic neuralgia is usually refractory to simple analgesic; this was seen in all the three patients with post herpetic neuralgia who used very strong analgesics including narcotic analgesics without pain relief. Currently the standard treatment for post herpetic neuralgia is with various tricyclic antidepressants (TCAS) which have been shown to reduce the severity of post herpetic neuralgia[12].Amitiptyline desipramine and domipramine either as monotherapy or in combination with other medications such as carbamazepine or opiods are effective [6] Side effects of tricyclic antidepressants include arrhythmias, postural hypotension, sedation, dry mouth, constipation, confusion and urinary retention. Their use is not appropriate in many patients with cardiovascular diseases ; this makes the use of these agents problematic in the 60 – year and older age group in which post herpetic neuralgia is prevalent [6] Gabapentin, which was introduced in the USA in 1994 anticonvulsant, has been found to relive pain in patients with intractable neuropathic pain including post neuralgia[1] Ataxia and dizziness are some of the side effects of Gabapentin which are particularly troublesome and distressing to the patients. In this study a 66 year old patient with post herpetic neuralgia who was placed on Gabapentin 20mg 8hourly experienced these side effects and dose of the drug had to be reduced to 100mg 8hourly to abolish the symptoms, it is advisable to start lower does and gradually increase the dose to enable patients get used to drug and reduce the side effects

Other drugs useful in the management of post herpetic neuralgia include Capsaicin, which is the pungent component of peppers. Topical application of capsaicin has been found to relieve the pain of post herpetic neuralgia but the side effects include burning and or erythema of the skin after application, the patient who experienced this was advised to dilute Capsaicin with petroleum jelly to reduce the burning sensation. Topical local anaesthetic spray and gel have also been found to relieve the pain of post herpetic neuralgia.

In the treatment of post herpetic neuralgia, a combination therapy using Gabapentin amitriptylin and a topical agent such as capsaicin is advocated. Where capsaicin is not available, topical local anaesthetic spray or gel may be used.

CONCLUSION

Needless treatment regimes can be avoided in patients with neuralgia by taking a thorough history and physical examination coupled with a high index of suspicion. Carbamazepine is still the drug of choice of treatment of trigeminal neuralgia but some patients would need additional drugs for complete pain relief. Depression is a real threat in neuralgias therefore clinicians be aware are of this and treat it

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