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

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ABSTRACT

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 studied. Using strict for diagnosis, patients were categorized into: trigeminal, glossopharyngeal and post herpetic neuralgias.

Results: Eight patients had trigeminal neuralgia; three patients had post-herpetic neuralgia and one patient had glossopharyngeal 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 glossopharyngeal 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, Glossopharyngeal Neuralgia, Post- Herpetic Neuralgia

INTRODUCTION

The dental practitioner is faced with the challenges of evaluation and orofacial pain 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 of 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 odontogenic sources usually lead to misdiagnosis an unnecessary teeth extraction with out any relief for the patient.

Several symptoms of trigeminal neuralgia may be mimicked by odontogenic pain. Trigger points for trigeminal neuralgia be intraoral and result in sharp unilateral shooting pain, which can mimic acute pulpitis. The trigger is a non-painful stimulus and may include chewing or exposure to temperature change. In addition, trigeminal neuralgia may be sudden in onset. As with odontogenic pain there no known sensory abnormalities such as paraesthesia or dysesthesia in the affected region. Many patients have had one or more teeth extracted in the areas affected by trigeminal neuralgia. Trigeminal neuralgia is relatively rare with worldwide prevalence between 1:30,000 and 1:70,000. Approximately 3% of patients presenting with trigeminal neuralgia have multiple sclerosis 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, visual disturbances, multiple neurologic lesions, muscular weakness and paraesthesia. Facial pain usually occurs late in the disease.

Glossopharyngeal neuralgia is less common than trigeminal neuralgia. Paroxysmal pain of glossopharyngeal neuralgia is similar to that of trigeminal neuralgia except that the distribution of the pain different and it is triggered by swallowing. 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.

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Talking and swallowing initiate the attack. Differential diagnosis of glossopharyngeal neuralgia includes cancer of throat and tuberculosis of larynx as these diseases will have pain symptoms that radiate to the same area. 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. Post herpetic neuralgia is usually refractory to simple analgesic therapies and treatments including a wide variety of drugs and routes of delivery.

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. 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. He came for review and monitoring of hematological indices.

Dental clinic records for each patient were retrieved and the following information recorded for each of the patients: sex, side of face affected (right or left), nerve involved, trigger zone, treatment given, 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 nerve that last for only seconds or minutes with complete freedom from pain between the attacks. The pain is using unilateral but may be bilateral. 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. Odontogenic pain and pain from other sources were excluded.

Glossopharyngeal Neuralgia

Consists of paroxysmal pain similar to trigeminal neuralgia involves the tonsil, pharynx and anterior pillar of the faucius through the side of the neck to the ear and tympanum.

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.

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 Amimiptline in addition to carbamazepine and one patient (12.5%) had phenytin in addition to carbamazepam. Three patients with trigeminal neuralgia (two males one female) had recurrences after treatment.

Post-Herpetic 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. Amitriptyline 50mg b. was added. This resulted in improvement of pain though total pain relief was not achieved. One patient had Capsaicin cream and Gabapentin, which resulted in considerable relief of pain.

Glossopharyngeal Neuralgia

The patients with glossopharyngeal neuralgia responded well to carbamazepin alone.
Table 1: Pattern of Neuralgias

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

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 peripheral nervous system. Patients with neuralgia of the orofacial region are likely to present first to their dentist in the USA. 80% of patients with trigeminal neuralgia present first to their dentist. Observations in this study corroborate this finding. all the twelve cases seen in this study to present first to their dentist. Two of the eight patients with trigeminal neuralgia 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. reported two cases of trigeminal neuralgia that were initially managed as pain of odontogenic origin. Savage et al. also reported a case.

Trigeminal neuralgia is generally regarded as a relatively rare condition. The condition is said to have a female preponderance. 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 5th - 6th decade of life. However in our study we observed that trigeminal neuralgia occurred earlier in both sexes (mean age for female is 48.8 years, males 40.6 years).

Katusic et al. 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 branch. This agrees with the findings of Katusic et al. in which mandibular and maxillary branches 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 were treated for 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-convulsants are the mainstay in the management of orofacial pain of aneurologic origin. 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 glossopharyngeal neuralgia responded well to carbamazepine though two of the patients had to be given additional medication (Phenytoin and amitriptyline) before total pain relief could be achieved.

The main side effect of carbamazepine is ataxia or drowsiness especially in the elderly; this is made worse by the concurrent use of sedatives and hypnotics. 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, gingival hyperplasia with idiosyncratic reactions e.g. hepatitis.


Patients with inadequate control with carbamazepine take Clonazepam (Baclofen) 11. Newer anticonvulsant drugs are Vigabatrin with Tiagabine 30, while these are currently being evaluated and are said to be promising. Post herptic neuralgia is usually refractory to simple analgesics: this was seen in all the three patients with post herptic neuralgia who used very strong analgesics including narcotic analgesics without pain relief. Currently the standard treatment for post herptic neuralgia is with various tricyclic antidepressants (TCAS) which have been shown to reduce the severity of post herptic neuralgia 12. Amitriptyline desipramine and domperidone either as monotherapy or in combination with other medications such as carbamazepine or opioids 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 herptic neuralgia is prevalent 6. Gabapentin, which was introduced in the USA in 1994 as an anticonvulsant, has been found to relieve pain in patients with intractable neuropathic pain including post herptic 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 herptic 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 doses 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 herptic neuralgia include Capsaicin, which is the pungent component of peppers. Topical application of capsaicin has been found to relieve the pain of post herptic 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 petrolatum jelly to reduce the burning sensation. Topical local anaesthetic spray and gel have also been found to relieve the pain of post herptic neuralgia.

In the treatment of post herptic 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 of this and treat it.

REFERENCES


Facial Neuralgias. Agbelusi G.A. et.al.