

FACIAL ARTHROMYALGIA IN NIGERIANS: A PRELIMINARY REPORT

B. D. O. Saheeb

Department of Oral and Maxillofacial Surgery, University of Benin Teaching Hospital,
P. M. B. 1111, Benin City, Nigeria.

ABSTRACT

Objectives: To determine the pattern of presentation of facial arthromyalgia (FAM) in Nigerians and compare the results with what has been reported for the disorder in Caucasians.

Materials and Methods: A data form was designed to collect among others, essential information on the signs and symptoms of the disorder as well as the psychosocial status of each patient. All consecutive patients who were seen at the pain clinic of the University of Benin Teaching Hospital (UBTH), Benin City, Nigeria were studied.

Results: Twenty cases of FAM patients were studied over a period of 5 years. Students constituted 35% of the study sample. Their ages ranged from 18-70 years with a mean age of 32.7 years. An equal number of men and women participated in this study. Symptoms ranged from clicking 75%, headache 75%, joint pain 60%. In 13(65%) patients, the pain was provoked by chewing, stress in 4(20%) and mouth opening in 3(15%). The most associated pain was headache in 15(75%) patients. The most predominant habit was hand-on-chin posture 80%. All patients were managed conservatively and majority of them reported amelioration of symptoms.

Conclusion: The pattern of presentation of FAM in Nigerians in this preliminary report compares with what has been reported for the disorder in Caucasians.

KEYWORDS: *Facial arthromyalgia, Nigerians, Preliminary, report.*

INTRODUCTION

Facial arthromyalgia (FAM) is the title now commonly used to describe a group of symptoms involving the temporomandibular joint (TMJ), the muscle of mastication as well as those muscles surrounding the joint¹⁻⁵. It appears that there is a gradual move away from the use of titles like mandibular pain dysfunction syndrome⁶, mandibular dysfunction syndrome⁷ and other titles⁸ which appear less descriptive of the signs and symptoms of the joint.

Although FAM is the commonest cause of oro-facial pain after odontalgia, a lot of controversy still surrounds its aetiology, clinical signs and symptoms, management and even the correct title to be used for the disorder³. The cardinal symptoms of the disorder have been well documented and these include joint pain, muscle pain, clicking, locking, trismus and headache. These symptoms may be present without any significant organic changes in the TMJ. The concepts of trauma, malocclusion and muscle dysfunction as the principal causes of the disorder were popular but were generally faulted⁹ whereas stress, adverse life events and personality traits^{1,7,10,11} are the strongest known aetiological factors.

Recently, some workers have focused research on how stress provokes pain in the TMJ. They hypothesized on a stress-

induced neuropeptide inflammation in the joint capsule which can cause pain as well as producing free radical damage to the joint⁴. Furthermore, it has been shown that these patients show increased generalised free radical activity compared to pain free controls¹².

There is evidence^{1,6,7} to show that the condition responds well to conservative management. It has therefore been advocated that this should always be the first line of management until the symptoms disappear and the patient is emotionally stable. Although surgery has been reserved for a small group of patients with internal derangement and impaired function, many of these patients eventually become resistant to conservative management after surgery⁴.

FAM has been shown to be common world wide and the problem of the disorder is frequently found in countries and communities with advanced social systems⁶. As the social system in Nigeria is advancing, a number of stressors have been identified¹³. There appears to be no documented evidence of the disorder in Nigerians. The author is not aware of any research that has been conducted in Nigeria to determine the pattern of presentation of FAM in Nigerians. This formed the basis of a 5-year prospective study of FAM patients seen at the pain clinic of the UBTH, Benin City. The results were to be compared with what has been reported for Caucasians.

*Correspondence: Dr. B. D. O. Saheeb

MATERIALS AND METHODS

The study was based on patients who attended the pain clinic of the department of Oral and Maxillofacial Surgery of the UBTH, Benin City, Nigeria from 1993 to 1998. A data form was designed to collect among others, information on gender, age, marital status, occupation, ethnic origin, reasons for attendance, previous treatment, previous trauma, trismus, associated pain, habits, type of diet, methods of tooth brushing. Psychosocial problems such as sleep disturbance, tension, stress, marital status, relationships were also investigated.

Clinical examination was aimed at eliciting tenderness on palpation of the joint, muscles of mastication, neck and shoulder. Mouth opening was measured and the following were also noted: deviation, trismus, joint sound (clicking and crepitus) diagnosed with stethoscope, occlusal relationship, mucosal ridging, free way space, overjet, attrition, premature tooth contacts, prosthesis. Resistance and loading tests as explained by Solberg^{14,15} were carried out. Where necessary, further investigations were done and appropriate treatment was instituted. Radiological and haematological investigations were carried out to exclude any hidden lesion that may account for patients' symptoms.

STATISTICAL ANALYSIS

The data were entered into a computer data base and examined statistically using a statistical package (SPSS). Range and contingency checking examined all data. Descriptive statistics were generated for some items. Simple frequencies were obtained for variable with multiple responses. All the frequency variables had percentages, cumulative percentages and corresponding related statistics. Only responses that has valid percentages were used.

RESULTS

Twenty (20) consecutive patients were seen and studied over a period of five years. They comprised of 10 (50%) males and 10 (50%) females. Their ages ranged from 18 to 70 years with a mean age of 32.7 years. There were 10(50%) unmarried 9(45%)

married and 1(5%) divorcee. The mean age of the females was 30 years while that of the males was 40 years. The various occupations of the patients are shown in figure 1 and students (35%) constituted the predominant group.

Twelve (60%) patients complained of joint pain. Of these, the pain was unilateral in 6(30%) patients and bilateral in the other 6(30%) patients. 4 (20%) patients complained of unilateral pain which was located in the left joint. Similarly, 3(15%) patients complained mainly of muscle pain. 7 (35%) patients described the pain as a dull ache, 4(20%) as sharp in character while 3(15%) patients described as throbbing.

In a majority of the patients (13(65%) the pain was provoked by chewing, stress in 4(20%) and mouth opening in 3(15%) patients respectively. In 7(35%) patients the pain was only relieved after taking analgesics, while in 10(50%) and 31(15%) patients the pain was relieved by not chewing and opening the mouth respectively.

Clicking was either audible or detected by the use of a stethoscope in 15(75%) patients. Three patients (15%) did not experience clicking. The ages of those who experienced clicking ranged from 20 to 40years with a mean age of 26 years. 7(35%) patients described the clicking as painful and on mid-opening in 4(20%) patients.

Trauma (slap on the face or road traffic accident) was not an antecedent factor in developing the pain in 14(70%) patients. It was only in 6(30%) patients that trauma preceeded the pain. Trismus was a significant finding in 12(60%) patients whereas only 5(25%) patients complained of it. Severity of trismus was assessed by the degree of mouth opening measured from the incisal edges of the upper central incisors to the incisal edges of the lower central incisors. Measurement varied from 3.5cm to 4.7cm with a mean of 3.8cm.

The number of patients that experienced pain and other symptoms from other parts of the body which they did not associate with the pain from the TMJ are shown in figure 2. It was also observed from the data analysis that patients who were 30 years and above 7(35%) were more likely to complain of neckache

Figure 1: The Various Occupations of Patients

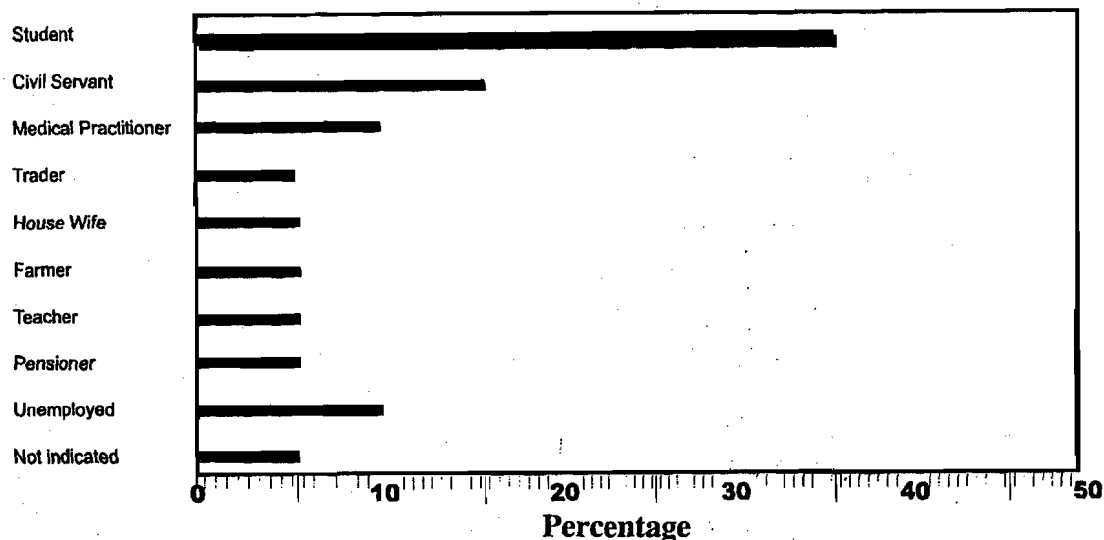


Figure 2: Recurrent Symptoms in Patients

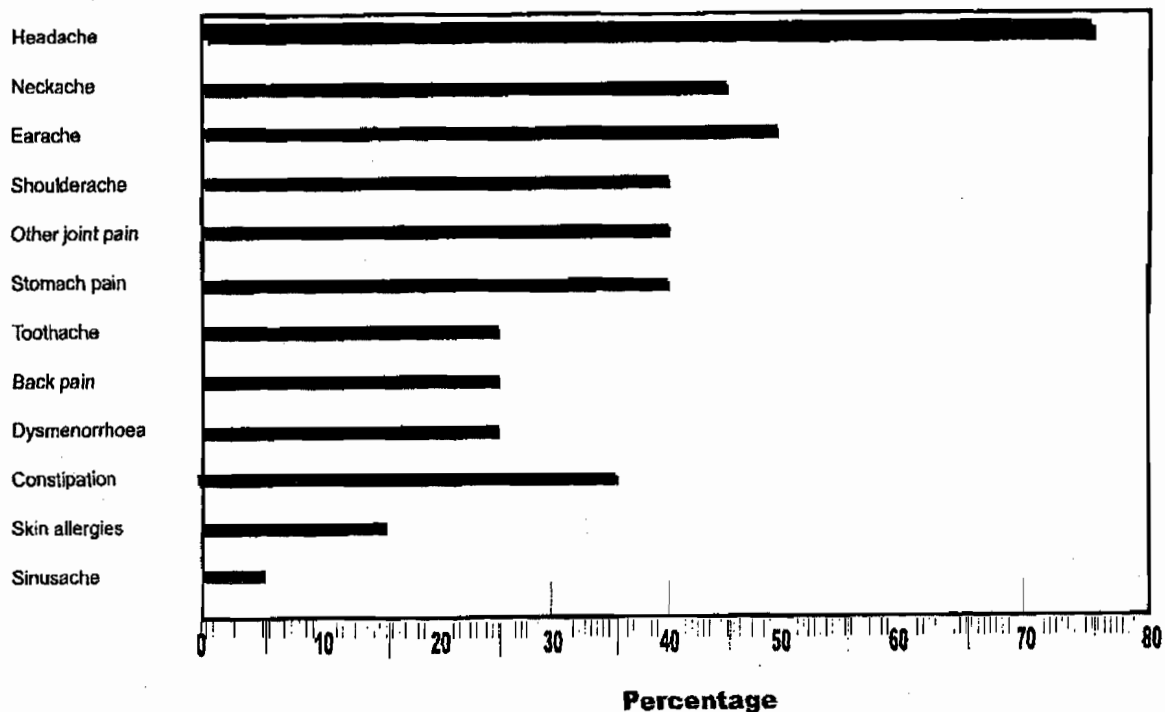
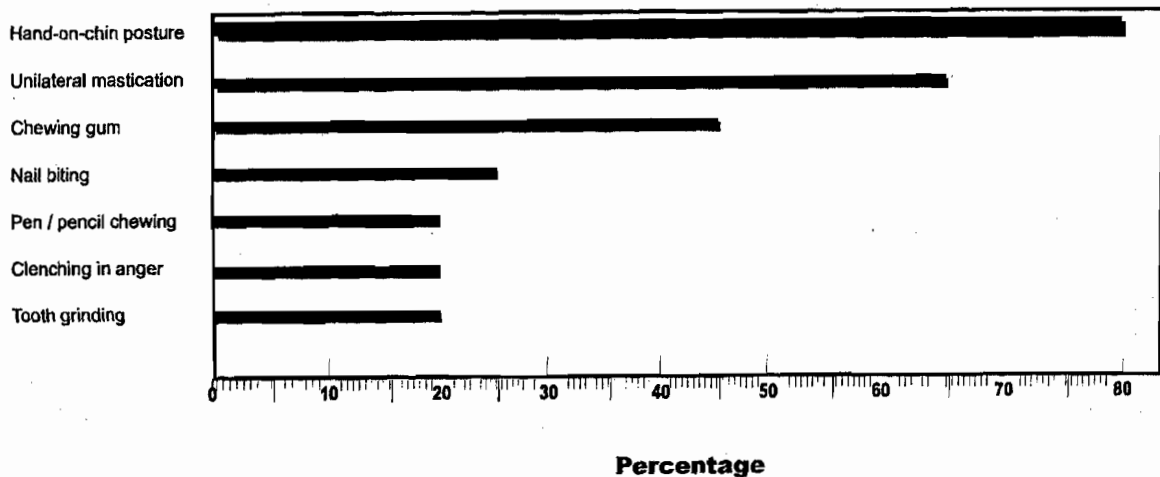


Figure 3: The Various Habits of Patients



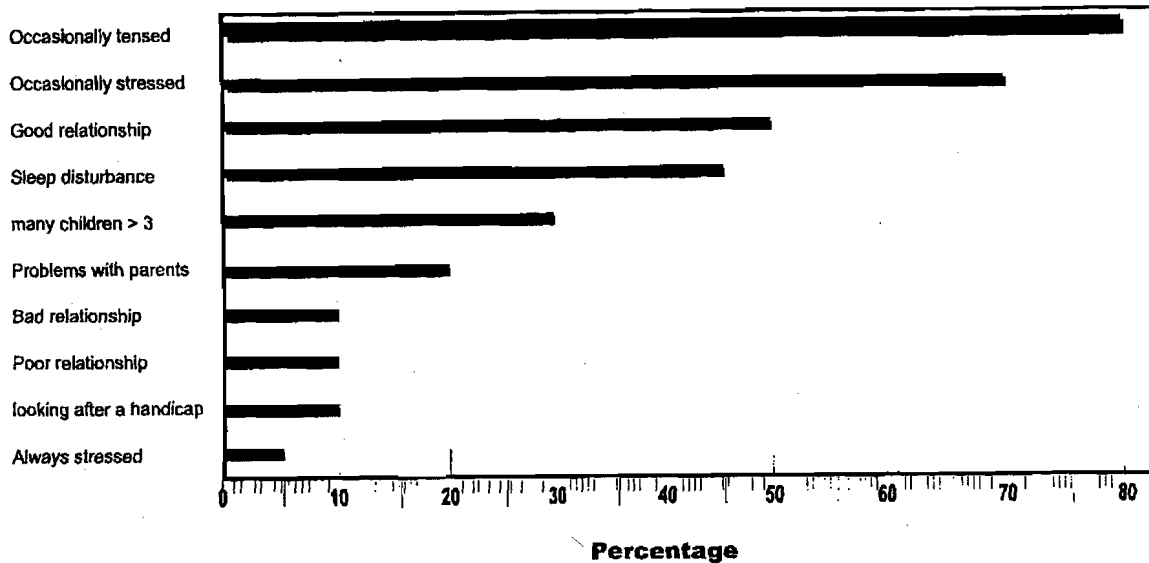
than younger patients. Similarly, patients complaining of pain from other joints 6(30%) and shoulder ache 3(15%) were more likely to be 35 and 38 years and above respectively.

Some patients indulged in habits which either preceded the pain or momentarily aggravated it. These habits are shown in figure 3. Three (15%) patients were looking after handicaps, 13(65%) were not and there was no response from 4(20%) patients. Although majority of the patients 15(7.5%) enjoyed their work, some would still like to change job and this constituted 6(30%) of the study cohort. Other psychosocial findings are shown in figure 4. Examination of the figure reveals an underlying psychogenic problem in these patients.

The principles of TMJ examination and tests as advocated by Solberg^{14,15} were adopted throughout the clinical examination of the patients. Joint tenderness was elicited in 12(60%) patients, masseter muscle tenderness in 8(40%) patients and temporalis muscle tenderness in 7(35%) patients. The neck and shoulder muscles were palpated in that order and tenderness in these muscles was elicited in 7(35%) and 5(25%) patients respectively.

Resistance test was positive in 11(55%) patients and negative in 7(35%) patients. Mouth opening was painful in 7(35%) patients and there was deviation to the painful side in 7(35%) patients. Occlusal relationship was Angle class I in 15(75%) patients, Angle class II division 1 in 4 (20%) patients and Angle class III in 1(5%)

Figure 4: The Psychological Problems Admitted by Patients



patient. Loading tests using unilateral and bilateral bite stick were positive in 3(15%) and 4(20%) patients respectively.

All patients were managed conservatively by counseling soft diet and the use of non-steroid anti-inflammatory drugs (NSAID). In 18(90%) patients, this was the management adopted. In 2(10%) patients where symptoms were more severe, heat application and physiotherapy were added to the above regimen. Of the 18(90%) patients, 3(15%) did not show signs of improvement. These patients together with the 2(10%) on physiotherapy and heat application were placed on bite raising appliance (BRA) made to cover the occlusal surfaces of the upper teeth. Patients were instructed on how to use the appliances and the earlier counseling instructions were reinforced.

Regular review appointments were carried out throughout the 5-years period of treatment. 7 (35%) patients admitted that symptoms were less, 4(20%) patients were cured as soon as relationship improved, 3(15%) were not improved, 5(20%) were lost and one (5%) patient got married and reported that she has been cured.

DISCUSSION

Facial arthromyalgia has been reported to be predominantly experienced by women^{1,6,7} and the sex ratio has consistently varied from female, male ratio of 3:1 to female, male ratio 4:1. The findings in this preliminary study did not agree with this clinical finding as equal number of men and women reported for treatment. Beside, reports from autopsy studies¹⁶ did not find any difference in the prevalence of morphological changes in TMJs from men and women under 80 years of age.

It is important to recognise the features that distinguish patients who report for treatment from those who do not. These features, are: frequency of symptoms, their persistence and severity. Although clicks are often tolerated by patients especially when they are painless, they tend to seek treatment whenever

there is persistent pain in the joint or in the muscles of mastication which interferes with function. Even though unilateral mastication was an unconscious habit formed by over half of the patients in this study, its effect on the signs and symptoms of FAM was equivocal. Franks' work¹⁷ which concluded that dysfunction occurred more frequently on the contralateral side than that preferred for chewing, has not been widely supported.

The pain from the joint had been described by the patients as a dull ache and this was also the predominant complaint reported in other studies¹⁷. Pain accompanying movement of the mandibular apparatus is pathognomonic of FAM¹⁴. However, there is reason to believe from the various psychological problems in these patients that pain developed in them as a psychological symptom following emotional support and long term life problems are widely recognised as the most plausible aetiological factors of the disorder^{1,4,7,10}. Furthermore, the majority of the patients studied were students who are exposed to stress of academic work and who have failed to adapt to it and manifest this failure in the TMJ.

An interesting finding in these group of patients was the incidence of recurrent symptoms experienced in other parts of the body. Many of the patients complained of shoulderache, headache, neckache and other bodily symptoms, the distribution of which was dissimilar and unrelated to the pain of temporomandibular joint. These findings agree with earlier report in which 80% of patients with psychogenic facial pain were also observed to complain of other recurrent symptoms such as backpain, headache and itching skin¹⁷. Berring¹¹ found that the prevalence of these symptoms in 100 patients studied was ten times higher than in the general population. Although attempts have been made to explain the generalised body pain experiences by FAM patients¹⁸ none appears convincing. However, there is a great resemblance between patients suffering from FAM and those who suffer from the generalised body pains of fibromyalgia

syndrome²⁹. Patients suffering from fibromyalgia syndrome also suffer from neck, back pains, headache, diffuse abdominal pain and dysmenorrhoea often aggravated by stress^{19,20}. The increased incidence of other pain complaints in these patients could be part of a spectrum of failure of adaptation to stress for which FAM is a component. Furthermore, current research has linked stress with the production of free radicals and consequent joint damage in patients suffering FAM¹².

The general approach towards the management of FAM patients has been conservative. The reasons for this are the prevalence⁶ of the condition and the fact that it can abort itself with or without treatment. Many of the conservative modes of management that have been employed by clinicians are varied and they have each been claimed to produce successful results. They ranged from reassurance or a placebo⁶ to more varied therapies like BRA intra-articular steroid injections, heat application, occlusal adjustment, analgesic, shortwave diathermy, ultrasound and laser therapy.

Surgical management of any of the patients in this study was not contemplated since majority of them were responding to conservative management. However, surgery is reserved for a small group of patients who clearly demonstrate impaired function of the joint⁸ due to irreducible internal derangement of the meniscus detected by standard imaging techniques. The contention that FAM is a stress engendered disorder in biochemically susceptible patients makes irreversible procedures such as surgery unlikely to produce long term relief⁴.

In conclusion, a great similarity was observed in the pattern of presentation of symptoms with what has been reported for Caucasians. Furthermore, stress, including problems with relationships between spouse and parents, looking after handicaps and many children were findings which precipitated and aggravated symptoms in the study cohort. It appears that the most predominant habits of hand-on-chin posture and unilateral mastication which patients indulged in before developing the pain in the study cohort have not been shown to be more prevalent among Nigerians than in Caucasians. They were therefore interesting findings which needed further investigation. The correctness of the observation made in this study may have to be tested in a future study employing a larger number of patients.

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