



Oral Rehabilitation in a Lifelong Migraine Sufferer - Case Report

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Abstract

Migraine is a common type of primary headache afflicting millions of people around the world with a wide variety of symptoms. Migraine headache causes a throbbing pain which is mainly unilateral and associated with photophobia, photophobia, nausea, and vomiting. Studies revealed that around significant proportion of the population suffer from migraine. In the present report, we documented case of a Lifelong Migraine Sufferer patient undergoing Oral Rehabilitation.

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254

Introduction

Migraine is a genetically influenced complex disorder characterized by episodes of moderate-to-severe headache, most often unilateral and generally associated with nausea and increased sensitivity to light and sound. The word migraine is derived from the Greek word "hemikrania," later converted into Latin as "hemigranea." The French translation of such a term is "migraine." Migraine is a common cause of disability and loss of work. Migraine attacks are complex brain events that unfold over hours to days in a recurrent matter. The most common type of migraine is without aura (75% of cases).¹⁻³

³Migraine is highly prevalent, affecting 12% of the population, attacking up to 17% of women and 6% of men yearly. Among children, it tends to happen more in girls than boys. The adjusted prevalence

of migraine is highest in North America, followed by South America, Central America, Europe, Asia, and Africa. It is ranked as the second leading cause of disability worldwide. Migraine tends to run in families. There is a reported risk of 40% if one parent has a history of migraine, which increases to 75% when both parents have a migraine history.⁴⁻⁶

Case report

A 38-year-old female African-American patient expressed concern with the absence of several teeth, notably the upper right canine and lower first molar. Upon the initial clinical assessment, it was determined that the patient was also experiencing Migraine, which prompted a thorough medical evaluation and collection of medical history. The extra-oral examination



yielded additional information regarding the patient's general health and facial anatomy. After the medical assessment, precise primary impressions were taken and diagnostic casts were made to enable a thorough analysis of the oral condition. Radiographic assessment was crucial in evaluating the density and structure of the bone, assisting in the development of an informed treatment strategy. Subsequent dental implant treatments were carried out to treat the areas without teeth in both the upper and lower jaw regions. The manufacture and implantation of the crowns were carried out using a strategic approach that considered the patient's specific

anatomical features and the diagnosed medical condition. The design and positioning were meticulously carried out to comply with anterior instructions, guaranteeing the best possible functionality and aesthetic balance. A comprehensive post-operative assessment was carried out to monitor the progress of healing and the sustained effectiveness of the dental implant operations. The incorporation of dental and medical factors in this complete approach demonstrates a dedication to delivering holistic treatment and attending to the various dimensions of the patient's oral and total well-being.

Extra oral Examination:



Intraoral Examination:



Occlusal Evaluation – Static:



Occlusal Evaluation – Dynamic



Right Working



Non-Working

256

Occlusal Evaluation – Dynamic



Left Working



Non-Working

Depending on the individual triggers, behavioural and psychological strategies and physical therapy can help some patients.⁸⁻¹⁰ A 38-year-old female African-American patient reported with missing teeth. On clinical examination, Maxillary right canine and mandibular first molar. On medical examination and obtaining medical history, patient was found to be suffering from Migraine. Extra-oral examination was done. This was followed by obtaining primary impression and fabrication of diagnostic casts. Radiographic evaluation was done. Dental implant procedures were carried out in both the edentulous spaces. Crowns were fabricated and placed keeping in view of anterior guidance. Follow-up was done. Melis M documented a case report of Migraine patient with aura and dental occlusion. A patient diagnosed with migraine with aura, with concomitant temporomandibular joint and masseter muscle pain, was treated by the use of a dental appliance. The treatment succeeded in eliminating headache and visual aura, and significantly reducing the other symptoms. A headache related to dental occlusion and dental parafunctions seems to be able to mimic a primary migraine headache. Therefore, dental evaluation is always advised for headache diagnosis.¹⁰ Reyes, A. J et al reported a case that illustrated how chronic migraine headaches and multiple dental pathologies caused severe and long-standing cranial pain that affected the quality of life of a man for more than 35 years. His case was investigated at several settings including the neurology outpatient clinic of the hospital without a definitive diagnosis or resolution. After investigations, multiple oral pathologies including two occult dental abscesses were diagnosed. Once both affected teeth and associated abscesses were surgically removed, with subsequent antibiotic therapy the headaches resolved.¹² Mohammed M. M et al, reviewed the association between chronic migraines and periodontitis through a systematic literature review. Four research databases (Google Scholar, PubMed, ProQuest, and SpringerLink) were searched according to PRISMA guidelines to retrieve the studies included in their review. A search strategy was developed to answer the study question with appropriate inclusion and exclusion criteria. Out of 34 published studies, 8 studies were included in this review. Three of the

studies were cross-sectional, 3 were case-control, and 2 were clinical report and medical hypothesis papers. Seven of the 8 included studies showed that there is an association between periodontal disease and chronic migraine. The elevated blood levels of some biomarkers such as leptins, ProCalcitonin (proCT), calcitonin gene-related peptides (CGRPs), Pentraxin 3 (PTX3), and Soluble Tumor Necrosis Factor-like Weak Inducer Of Apoptosis (sTWEAK) play a significant role in this association. The limitations include a small sample size, the influence of anti-inflammatory drugs, and a self-reported headache measure that is subject to misclassification bias. Their systematic review reveals a supposed correlation between periodontal disease and chronic migraine, as evidenced by various biomarkers and inflammatory mediators. This suggested that periodontal disease could potentially contribute to the development of chronic migraine.¹²

Conclusion

Migraine patients visiting dental clinics feel more anxious about the working environment and need certain modifications before, during, and after dental procedures.

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