CASE REPORT ARTICLE

THE SPECIALIZED CONSULTATION OF CHRONIC OROFACIAL PAIN IN THE DEPARTMENT OF ORAL SURGERY OF THE CCTD OF CASABLANCA: CASE REPORT

| Mahamadou KONATE [1]* | Dounia SARFI [2] | Siham TAISSE [3] | and | Ihsane BEN YAHYA [4] |

Department of Oral surgery | Centre de Consultations et de Traitements Dentaires CHU Ibn Rochd | Casablanca | Morocco |

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ABSTRACT

Chronic orofacial pain is a complex condition that requires specialized care from oral surgery departments such as the one at the "Centre de Consultations et de Traitements Dentaires" (CCTD) in Casablanca. Chronic pain is a complex disease that can be associated with various comorbidities, and its management involves a multi-faceted approach that takes into account a patient's medical history, physical and mental health, and lifestyle factors. A thorough consultation and examination can often lead to an accurate diagnosis and effective management of chronic orofacial pain. However, in some cases, complex signs and symptoms or lack of response to initial treatments can lead to frustration for both the patient and the practitioner. In this context, the CCTD in Casablanca has developed a specialized consultation for chronic pain, which involves a multidisciplinary team of oral surgeons, pain specialists, and other healthcare professionals. This approach allows for a comprehensive evaluation and treatment plan that addresses the underlying causes of the pain as well as associated comorbidities. In this article, we describe the organization of this specialized consultation and provide examples of four clinical cases to illustrate our experience in managing chronic orofacial pain.

Keywords: *Chronic orofacial pain, neuropathic pain, trigeminal neuralgia, case report*

1. INTRODUCTION

This work has been reported in accordance with the CARE guidelines (2013) [1]. Orofacial pain is a prevalent condition that affects a large number of patients. In most cases, clear and recognizable symptoms allow for an accurate diagnosis and appropriate management. However, in chronic pain cases, the diagnosis can be challenging due to frustrating and perplexing signs. To address this therapeutic challenge, the Department of Surgical Dentistry at the "Centre de Consultations et de Traitements Dentaires" (CCTD) in Casablanca has dedicated one session per week to patients suffering from chronic orofacial pain.

Established in 1981, the CCTD in Casablanca is a public institution with legal personality and financial autonomy. It operates under the supervision of the Moroccan Ministry of Health and serves as a hospital unit of the Ibn Rochd University Hospital in Casablanca [2]. The CCTD is comprised of various specialized departments, including the Department of Joint Prosthetics-Occlusodontics and the Department of Oral Surgery, both of which receive patients suffering from chronic orofacial pain. The patient flow is illustrated in Figure 1. The objective of this work is to describe and discuss the specialized pain consultation offered at the CCTD and to present four clinical cases encountered during the past month as illustrative examples.

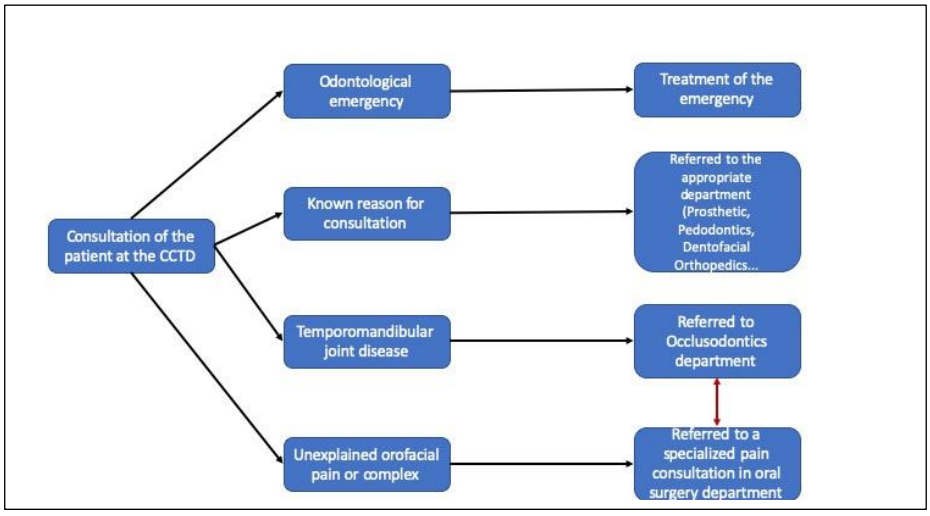

Figure 1: The figure presents the low of the patient arriving at the CCTD of Casablanca.

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2. Observations

In order to give a picture of the type of patients received, the diversity of clinical pictures and the complexity of the therapeutic strategies, we present 4 clinical cases from last month's consultation.

Observation 1: A 61-year-old female patient, with no particular medical history, presented with right maxillary pain for 3 years VAS=10. This pain was pulsatile, electric discharge type, intense, paroxysmal, following the path of the 2nd branch of the trigeminal nerve (V2) and radiating towards the right orbit with a background of pain in absence of crisis. The patient reported associated neurovegetative signs: lacrimation and hypersalivation. The pain disturbed her daily activities and sleep. The patient reported having performed multiple extractions following her persistent pain but in vain. She is now totally edentulous. She had also taken various painkillers and NSAIDs without success. After consultation with a general practitioner, she had started a treatment with pregabalin (anticonvulsant) which she stopped after 3 days of treatment without medical advice.

Our clinical examination revealed a total bimaxillary tooth loss and the absence of particularities on the panoramic X-ray. Touching the nasolabial fold sometimes reproduced the pain (Figure 2). We evoked the trigeminal neuralgia (V2) diagnosis, and a trial treatment with carbamazepine (1/2cp of 200 mg twice a day) was started. After ten days of treatment, we obtained a VAS=4 level. We increased the dose to 1/2cp three times a day for three months. The patient is still being followed up.

Figure 2: Intraoral views and panoramic radiographs showing the absence of dental or bony structures that could explain the pain.

Observation 2: A 61-year-old female patient, followed by her rheumatologist for osteoarthritis, was referred to us for right maxillary pain evolving for four years VAS= 7. The pain was pulsatile and located in front of the right tragus and, according to the patient, radiated to the whole right arm, the right hip, and the upper part of the right leg. The patient reported that the pain started on the left side and then moved to the right side. Extraoral palpation anterior to the mandibular fossa at the masseter muscle insertion caused punctual, irradiating, and unmodified pain on the opening and closing of the oral cavity. The intraoral examination had allowed us to objectify a dysfunctional occlusion by the absence of several teeth, a weakened periodontal ground on the remaining teeth, and amelo-dentinal attacks, of which one was on the right mandibular 2nd molar (47) (Figure 3).

Figure 3: Front view and panoramic X-ray showing multiple edentulas and large egressions.

Observation 3: A 51-year-old female patient with no particular medical history presented to the clinic with right maxillary pain that had been evolving since then with a VAS=10. The pain was poorly limited, described at the level of the right mandibular ridge, non-radiating, and continuous throughout the day. The pain disturbed daily activities, but I was not an insomniac. The patient had previously been treated with level I analgesics and nonsteroidal anti-inflammatory drugs without success. The extraoral examination was unremarkable, and the intraoral examination showed a total edentulous bi-maxillary tooth (Figure 4). We had evoked persistent idiopathic facial pain. The first-line treatment we proposed was medical, with the prescription of a tricyclic antidepressant (Amitryptilline) with a starting dose of 1 cp of 25 mg per day. The 7-day follow-up showed a VAS=5; an increase in the dose to 2 cps of 25 mg per

day showed a VAS=0 after three weeks of treatment. After one month of treatment, we started a dose reduction associated with low-level laser therapy (LLLT) by applying the diode laser at 0.3 watts for 60 sec in continuous mode every other day.

Figure 4: Intraoral view and radiographs showing a total bi-maxillary edentition and the absence of specific pathologies.

Observation 4: A 75-year-old female patient with no previous medical history was referred for right cervicofacial pain associated with tingling. The patient had been followed in the occlusodontics department for a left irreducible disc displacement (IDD) and a right reducible disc displacement (RDD) for one year without improvement. The patient reported right maxillary pain radiating to the entire right cervicofacial region with a VAS= 9. She reported precarious anterior pain relief when an occlusal splint was made. The clinical examination showed a clicking sound on opening and closing the mouth without any limitation of the opening. The musculature was tense to palpation without exacerbation of pain. The intraoral examination showed poor oral hygiene as well as amelo-dentinal damage (Figure 5). She had pain on axial percussion on the right mandibular premolars with inadequate endodontic treatment performed 2 years previously. A biological check-up showed a serum vit D deficiency. We evoked cephalalgia attributed to a TMD (Temporo-Mandibulary Disease) due to his left DDI and right DDR. This is associated with a lack of vitamin D and poor oral hygiene.

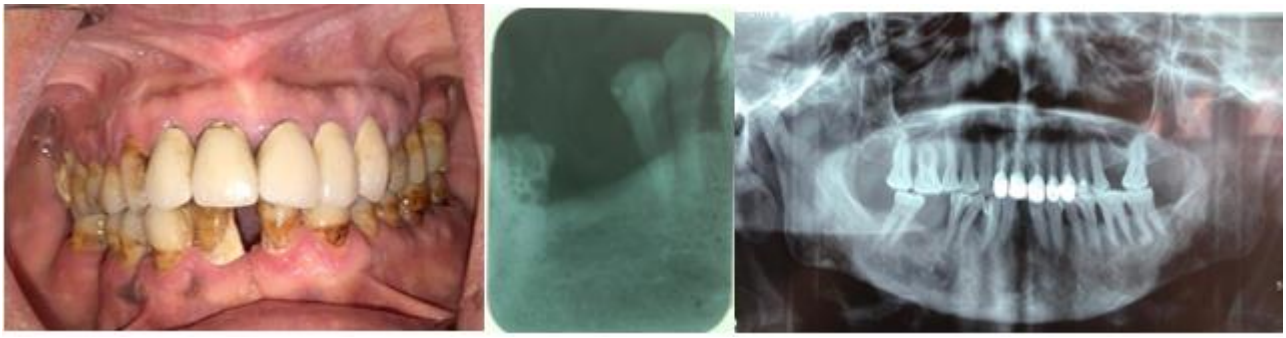

Figure 5: Intraoral view and radiographs showing poor oral hygiene and multiple defective endodontic treatment.

The treatment initially consisted of a vit D cure. A restoration of the oral cavity and resumption of the defective endodontic treatments was programmed. The patient reported a slight decrease in pain after ten days (VAS=6). After the oral cavity was restored, we referred her to the Occlusodontics Department for correction of temporomaxillary disharmony.

3. DISCUSSION

Chronic orofacial pain is a particular entity and requires specific management.
The specialized pain consultation at the CCTD takes place once a week for a duration of two hours and thirty minutes. We see an average of two to three patients at each consultation. The first consultation is crucial and can be particularly long (up to 2 hours). The check-ups and follow-ups of the patients are spread over other days of the week. The patient who arrives at the pain consultation systematically goes through a series of codified steps:

(1) Special pain interview: We have a standard clinical examination form that we have adapted to meet the needs of this interview. It must first include the patient's civil status as well as his medical and surgical history, the history and characteristics of his pain (onset, nature, intensity, evolution, interactions with lifestyle and sleep, behaviors to alleviate this pain, and cognitive explanation of the pain), the history of medications (doctors already seen? Medications taken and their effectiveness?).
(2) Iconography: This includes extraoral (face and profile) and intraoral photos, the complete medical file, as well as any document to help with the diagnosis.
(3) A complete clinical examination is conducted in a properly seated patient with the cervical-craniofacial area undressed, free, and clear of any obstacle to a good inspection. The clinical examination includes an inspection

and extraoral and intraoral palpation and is oriented according to the clinical situation. This examination is supplemented by additional examinations as needed (radiological, biological).

(4) This step represents the correct diagnosis based on all acquired data.

(5) Reassurance. This is an important step in pain consultation. The majority of patients in a chronic pain consultation have already seen many doctors from different specialties and are anxious and frustrated. It is, therefore, important to communicate/explain the characteristics of the chronic disease, the associated symptoms, and the expected course.

(6) At this level, proposing a suitable and acceptable treatment plan is important.

- The diagnosis retained for the 1st case is **trigeminal neuralgia (V2)**.

Trigeminal neuralgia is classified as neuropathic pain. It is the most frequent orofacial pain of non-odontogenic origin. Its prevalence varies from 76.8/100,000 to 29.5/100,000 people worldwide [3–5]. Trigeminal neuralgia is a chronic, paroxysmal, and recurrent pain that affects the territory of one or more trigeminal nerve branches. In 80 to 90% of cases, it is classic trigeminal neuralgia due to compression of the nerve root in the posterior fossa by vessels, most often the superior cerebral artery [6,7]. In other situations, it is secondary trigeminal neuralgia, which can be due to different factors, in particular lesions of the nerve in the context of multiple sclerosis, or by tumor compression or arteriovenous malformation affecting the nerve or Gasser's ganglion [8,9], which is why it is important to systematically carry out an MRI (magnetic resonance imaging) to determine the cause. In our case, the patient could not perform an MRI due to a lack of financial means. In the face of a normal clinical neurological examination, we classified it as classic trigeminal neuralgia and opted for medical treatment. The positive response to the carbamazepine test confirmed the diagnosis.

- Our second case was quite complex because it did not fit into any nosological framework of pain.

The complaints described by the patient were similar to the so-called nociplastic pain of the musculo-articular type. Still, she did not describe any pain in opening and closing the oral cavity. In addition, the pain on palpation of the masseter muscle had diminished during the second consultation. We decided to start with the treatment of caries in the oral cavity. At the next check-up, the patient noted a clear improvement and was feeling well. It is important to emphasize the importance of reassuring the patient and the impact a simple procedure can have in managing nociplastic pain.

- The diagnosis chosen for our 3rd case was **persistent idiopathic facial pain (PIFP)**.

PIFD is described as persistent facial and/or oral pain with variable presentations but recurs daily for more than two hours for more than three months without clinical neurological deficits [10]. Its prevalence is estimated at 0.03% with a female predominance [11]. PIFP is often confused with trigeminal neuralgia but differs clinically. PIFD is initially located but quickly becomes radiating and maybe bilateral but does not follow the path of a nerve. It is not paroxysmal and does not cause insomnia. It is idiopathic, i.e., the thorough clinical examination does not reveal any underlying cause. The treatment of PIFD remains complex and does not always give the expected results. It seems tricyclic antidepressants, with amitriptyline as the leading agent, are the most effective [12,13]. Among the non-medicinal treatments, hypnosis seems to improve the symptoms [14].

- The diagnosis retained for the last case was that of a **headache due to temporomandibular disease (TMD)**.

The management of the headache is therefore based on treating the TMD. In addition, the patient had various comorbidities. First, local comorbidities, such as defective treatments or poor hygiene, had to be corrected. Then, we prescribed a course of vitamin D, which is an ampoule of 100,000 IU per day for two months. Vitamin D is synthesized by the skin through exposure to the sun and provided by food, and it seems to contribute to the management of chronic pain. Indeed, some studies have shown an association between low vitamin D levels, a high incidence of chronic pain, and improved pain following vitamin D supplementation [15,16]. However, due to the low quality of the studies carried out, the systematic review published by Cochrane could not demonstrate a real contribution of vitamin D in the treatment of chronic pain [17]. We recommend supplementing with an ampoule of 100,000 IU for two months and checking the vitamin D levels after two months of treatment.

Chronic pain is often associated with multiple comorbidities, which can be local, such as amelo-dentinal attacks, pulpitis, or painful periodontal disease, as well as cracks. As dentists, we have the advantage and duty to detect any local comorbidity and treat it when necessary, as sometimes the cause of the pain is indeed local. *Our 28-year-old patient, F.N, presented with left pulsatile mandibular pain radiating to the face and left cervical area. She had seen several specialists and undergone various complementary examinations, such as cervical ultrasounds and scans, which were often not reimbursed.* After a thorough clinical examination, we diagnosed a crack in the left mandibular second molar, which was treated, to the patient's relief.

Remote comorbidities are also frequent and include all comorbidities not concerning the oral cavity. The treatment of remote comorbidities does not fall within the competence of the oral surgeon. Nevertheless, they must be known,

detected if necessary, and referred to the concerned specialists for better management. The need for multidisciplinary management of chronic pain cannot be stressed enough.

Many of the patients we see in consultation are being followed for significant depression, while others report signs pointing to a depressive state. *For instance, Mrs. D.B. said, "Since my pain started, I don't go out of the house; when I start talking, the pain comes, and I can't play with my grandchildren anymore; I spend the day lying or sitting in the house."* A 2017 study [18], found that patients with dento-maxillary disharmony (DMD) had high levels of depression, somatization, and sleep disorders. Major depressive disorders are a significant component of chronic pain [19]. Furthermore, it is known that chronic arousal leads to long-term alterations in immunological, neural, and endocrine functions [20].

Certain pathologies, such as rheumatic diseases, osteoarthritis, or malignant diseases, can cause chronic orofacial pain. These pathologies should be considered, and in collaboration with the attending physician, their treatment should be associated with pain management. *For example, Mrs. F.G., aged 18, who was followed for generalized osteoarthritis, presented with pain described as radiating to the entire right side of the body with unilateral right cervico-facial involvement. After examining the oral cavity and ruling out any possible local causes, we diagnosed a headache attributed to a systemic disease.*

5. CONCLUSION

Chronic orofacial pain is a multifaceted condition that necessitates a comprehensive clinical and paraclinical assessment to determine its underlying cause and develop an appropriate treatment strategy. While a specific cause can be identified and treated in some cases, in others, the diagnosis may be more challenging and may require a process of elimination. This underscores the need for continued research into the underlying mechanisms of chronic orofacial pain to enhance our ability to diagnose and manage this condition effectively. Moreover, a collaborative, multidisciplinary approach that includes medical and dental professionals is critical to achieving optimal management and outcomes for patients with chronic orofacial pain.

Conflicts of interest: No declared conflicts of interest.

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List of abbreviations:

CCTD: Centre de Consultations et de Traitements Dentaires,
VAS: Visual Analog Scale,
NSAID: Non-steroidal Antiinflammatory Drugs,
TN: Trigeminal Neuralgia,
IDD: Irreductible disc deplacement,
RDD: Redductible Disc deplacement,
TMD: Temporomandibular Disease,
PIFP: Persistant Idiopathic Facial Pain.

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