

# Orofacial Pain of Non-Odontogenic Cause-Retrospective Study on 100 Patients Referred to the Primary Dental Health Care

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## Summary

*The diagnosis of orofacial pain is an essential and frequently undervalued component of dental practice. The aim of this retrospective study was to report causes, diagnostic procedures applied and clinical manifestations of non-odontogenic orofacial pain in patients referred to primary dental care. In our patients, pain most frequently occurred in the maxilla, followed by the mandible, ear and temporomandibular joint (TMJ). Out of the accompanying symptoms, inflammation was reported in most of the patients. The character of the pain was described as deep, unilateral, dull, bearable, and pulsing. Forty-four patients reported stress with equal distribution according to the gender of patients. The average duration of pain before seeking the professional help of a dentist was 4.23 months. The average duration of pain once it had started was 8 hours. Most frequent causes of non-odontogenic pain in our patients were malignant tumors in the oral cavity, followed by TMJ disorders and trigeminal neuralgia.*

Key words: *orofacial pain, etiology.*

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## Introduction

The dental practitioner is faced with evaluating orofacial pain on an almost daily basis, and occasional cases are diagnostic challenges. To make a definitive diagnosis, it is often necessary to establish a list of possible differential diagnoses and then to systematically exclude each by a process of elimination through diagnostic tests and investigations. Associated with pain are cultural, economic, psychosocial and pathophysiological conditions (1). Head and orofacial pain are a challenge to the cli-

nician, and are taxing and frustrating to those afflicted. The head and face are subjected to chronic and recurring pain more than any other portion of the body (2). The diagnosis of orofacial pain is an essential and frequently undervalued component of dental practice. When patients seek treatment from a dental practitioner for orofacial pain, it is usually assumed to be odontogenic in origin. As a result diagnostic procedures are often limited to identifying a suspect tooth rather than considering a non-odontogenic source of pain. Because of the irreversible nature of many dental procedures it is cru-

cial that every effort is made to arrive at a correct diagnosis before initiating treatment (3). The talents of several disciplines are often required because many anatomic, physiologic and psychological factors are potentially causative in such disorders (4). The difficulty and frustration related to the diagnosis and subsequent treatment of patients with chronic orofacial pain may be attributable in part to the multidimensional nature of pain. Several different facial pain conditions exist, often with overlapping signs and symptoms and this tends to add another level of complexity to the diagnosis and management of chronic orofacial pain (5). Meanwhile, worldwide there is an increasing need for epidemiological studies of the subjective and objective manifestations of chronic and recurrent pain in human populations. More evidence on dimensions of the morbidity of pain, its natural history, persons at high risk and methods of preventing it are needed. Epidemiological findings are useful in setting the diagnostic criteria and facilitating the differential diagnosis of facial pain, although the impact on health services may be debated, the ultimate benefit for chronic facial pain patients should not be doubted(6).

### Materials and methods

Prior to this investigation informed consent according to Helsinki II was obtained from each participant. Forty-seven men and 53 women participated in this study. Their age range was 16 - 85, mean 52.4 years. Patients included in this study were those with pain of non-odontogenic origin, diagnosed on the basis of a detailed medical history, clinical and radiographic examination. The results were analysed using methods of descriptive statistics.

### Results

Most frequently the patients reported that pain was localized in the maxilla (52%), followed by the mandible (39%), ear (22%), TMJ (21%), cheek, temple and floor of the mouth (17%), tongue (12%), forehead (10%), eye (9%), pharyngeal part and salivary gland area (4%) and nose (2%). 49% of the interviewed patients reported that pain was spreading, and 68% felt that pain is unilateral. 64% of our

patients felt deep pain, whereas 89% felt that the pain was bearable. Character of the pain reported by our patients is given in Table 1. Interesting data show that in 57% patients pain was dull, in 46% sharp and in 37% with symptoms of burning. 48% of patients reported that pain evolved from the state of being still, and the same number felt that moving induced the pain symptoms. Accompanying symptoms of pain are shown in Table 2. In 21% of patients inflammation was a concomitant symptom, in 10% increased lacrimal secretion and in 8% rhinorea. 31% patients reported sleep disturbances because of the pain, with similar distribution according to the gender. In 34% of our patients pain was alleviated by the use of analgesics. Table 3 presents methods of pain relief. Neither rest, nor warming and massage alleviated pain symptoms in 41% of patients. Previous medical and dental treatment were conducted in 38% of our patients. The average duration of pain before seeking help was 4.23 months. The average duration of every pain attack was 496.75 minutes, i.e. 8 hours. Previous disturbances such as dental surgery were reported in 17% of patients, followed by inflammation in 9% of the interviewed participants, and finally trauma was reported in 3% of our patients. Parafunctional habits seen in our patients are presented in Table 4 and show that in 46% no parafunctional habits were found. According to the visual analogue scale, most frequently men reported that the score was 6, and for women the score was 3.5. Further treatment was conducted in 92% of the participants. Table 5 shows the diagnostic procedures performed in our patients which include palpation, X-ray, CT, ultrasound, biopsy, anaesthesia, complete blood count.

### Discussion

The majority of our patients were in the fifth decade of life, as was also reported by Remick et al (7). Other authors (4, 8) found that frequently patients with pain have bimodal distribution in age which is seen in the third and fourth and later in the fifth and sixth decade of life. Surprisingly, van Korff et al (6) reported that facial pain had lower prevalence after the age of 65, but the same author also reported that symptoms were more common among females than males. Studies (4, 7, 9) repeatedly

found that women dominate those seeking care for TMJ disorders and burning mouth syndrome, but not phantom tooth pain. These results are in concordance with our study as TMJ disorders and burning mouth was the most frequent cause of pain symptoms in women, whereas in men TMJ disorders and malignancies in the oral cavity were frequently seen.

Remick (7) and Mock (4) as well as Sternbach (10) also found that a large number of patients with atypical facial pain had undergone extensive dental, surgical and medical treatment prior to admittance to their clinics. A finding which was also confirmed in our investigation. In 17% of our patients dental surgery procedures were performed before they were referred to our clinic. Feinmann et al (11) and Engel (12) reported that although a defined psychiatric illness may not be demonstrable, underlying psychological problems appeared to be significant in the majority of cases. Last but not least, Mock (4) reported that psychological factors are dominant in the majority of cases, including many with an apparently organic initial stimulation. We also found that approximately half of the patients were stressed out, one quarter of our patients reported anxiety and one third of the patients had sleep disturbances. Remick (7) reported that 69% of their patients with pain symptoms had a specific psychiatric illness. It is important to note, as suggested by Rushton et al (13) that many of these patients had previously unrecognized non-psychiatric problems that were causal factors in their pain complaints. Goldberg (14) and Katon et al (15) advanced the idea that somatization is a form of expression of anxiety and affective illness. In our 6 female patients somatic cause of the pain could not be established, although extensive diagnostic and clinical examinations were conducted, and they were referred to a psychiatrist. Unfortunately, so far it is impossible to draw any conclusions as to whether the psychological symptoms are primary or secondary in relation to the pain symptoms. In our patients average duration of pain symptoms during the day was 8 hours, whereas van Korff et al (6) found that the average duration of pain in more than half of their patients was 4 hours. Also 14% of their patients reported that they were unable to carry out some activities due to their pain condition. Mock (4) also found that 86% of patients had unilateral pain symptoms, a finding also found in

our study but in a smaller percentage, being 68% of our patients. Benoit et al (16) reported that the average age of their patients was 42.6 years and there was a high female preponderance (M : F = 1 : 2.6). All patients reported severe episodic pain, the vast majority being unilateral. 48% of patients reported that pain was pulsatile and 34.5% that it woke them from sleep. The study Cohen and Quinn (17) showed that in five patients with facial pain and limited jaw opening, which included two infections, two primary carcinomas, and one metastatic carcinoma, misdiagnosis of TMJ dysfunction was established. The results of our study show that 13 patients were mis-treated in terms of correct diagnosis and treatment.

### Conclusions

1. Average age of our participants with orofacial pain of non-odontogenic origin was 52.4 years and women were more frequently affected.
2. In women, temporomandibular joint disorders and burning mouth syndrome were the most frequent causes of orofacial pain of non odontogenic origin, whereas in men also temporomandibular joint disorders as well as malignancies in the oral cavity were the most frequent cause.
3. 44 patients reported stressful condition, and 31% of patients had sleep difficulties, with equal distribution between sexes.
4. Average duration of pain symptoms during the day was eight hours.
6. 68% of our participants had unilateral symptoms and in 49% of participants pain had the characteristic of spreading.
7. According to visual analogue scale, men reported values-6, and women 3.5 out of ten, while ten signified unbearable pain.
8. In 34% of our patients, pain was alleviated using analgetic drugs.
9. In 46% patients no evidence upon parafunctional habits were recorded.
10. Character of pain symptoms in 57% of patients was dull, in 46% sharp, and in 37% as burning.
11. Accompanying symptoms in 21% patients were inflammation, 10% lacrimal secretion, and 8% rhinorea.

12. Average duration of pain symptoms before asking professional assistance was 4.23 months.
13. Most frequently pain was localized in the upper jaw (52%), lower jaw (39%), ear (22%), temporomandibular joint (21%), cheek, floor of the mouth (17%), tongue (12%), forehead (10%), eye (9%), throat and salivary glands area (4%) and nose (2%).

14. Furthermore, 48% of the patients reported that pain starts at rest and that moving reinforces pain.

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