Effect of Psychiatric Treatment on Unexplained Oral and Maxillofacial Sensory Disorders

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Abstract

Objective: Sensory disorders may occur with no known etiology making the diagnosis and treatment problematic. The present study aimed at evaluating the efficacy of psychotherapy for unexplained oral and maxillofacial sensory disorders.

Methods: In this experimental study, 20 patients with unexplained oral and maxillofacial sensory disorders with no known etiology were studied. The severity of symptoms was rated by patients on a 0-5 numerical scale. The patients were then referred to a psychologist for counseling. All subjects were followed up every two weeks for 6 months and the severity of their symptoms was rated and recorded. The mean severity of sensory disorders was compared before and after treatment using t-test.

Results: A positive correlation was detected between psychiatric treatment and reduction in severity of symptoms.

The mean severity score of sensory disorders was 4 before and 1.1 after the treatment. Rate of response to treatment was higher in men than in women. Also, response to treatment was greater in patients with involutional melancholia than in those with other psychological disorders.

Conclusion: The study results showed that the severity of medically unexplained oral and maxillofacial sensory disorders decreased by psychiatric treatments.

Key words: Sensory disorders, Psychiatric treatment, Oral

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Introduction:

A difficult task in the field of oral medicine is diagnosis and treatment of patients who constantly complain of symptoms for which a specific cause cannot be found. Medically unexplained sensory disorders are a medical and dental reality. Such patients still seek treatment when the diagnostic workup fails to find a cause for their condition. This group of patients commonly experience chronic pain, burning sensation, bad taste in their mouth, atypical facial pain, glossodynia, burning mouth syndrome and subjective xerostomia (1). These complaints were first explained by Freud as pains of psychological origin (2). The mentioned sensory disorders often manifest in the form of chronic pain. The mechanism of these conditions may be explained as follows: pain transmission pathways initiate from the cerebral cortex, hypothalamus and the limbic system and terminate in thalamus or spinal cord. Neurotransmitters released in these pathways can intensify or inhibit the pain...
impulse entering the spinal cord or thalamus. Five-Hydroxytryptamine (5-HT) and nor epinephrine (NE) are among these neurotransmitters. The balance of these neurotransmitters changes in the course of psychiatric disorders which per se alters the effect of the descending pathways on thalamus and spinal cord. Anxiety can also cause a reduction in level of gamma amino butyric acid (GABA) in the CNS. Subsequently, its inhibitory effect on neurons is reduced and neuronal activity increases (3,4).

Considering all the above, it seems that the medically unexplained maxillofacial sensory disorders are related to some mental and psychological conditions. This is especially important because if the physician or dentist only look for a physical cause for these conditions and disregard their psychological aspects, these conditions cannot be diagnosed or are misdiagnosed resulting in unnecessary treatments that impose unnecessary costs, waste patient and physician’s time and betray the patient’s trust in the medical team.

The present study aimed at evaluating the efficacy of psychotherapy in improving these conditions.

**Methods:**

This experimental before and after clinical trial was conducted on 20 patients (16 males and 4 females) presenting to the Oral Medicine Department of Mashhad Dental University complaining of medically unexplained oral and maxillofacial sensory disorders. Data regarding the qualitative and quantitative variables of patients were collected through observation and interview and recorded in related data sheets. Written informed consent was obtained from all patients at the beginning of the study. All the possible differential diagnoses were thoroughly evaluated through paraclinical examinations and consultation with different specialists. Only patients with medically unexplainable conditions who accepted to participate in the 6-month follow up period were entered the study. A 0-5 numerical scale was used to rate the severity of symptoms. Every one-unit reduction in the severity of symptoms was considered as a positive response to treatment. After ensuring that the patients’ conditions had no medically explainable cause, the patients were referred to a psychiatrist for counseling. Eventually, patients’ mental conditions were diagnosed by specific tests and the necessary medications were prescribed.

After the first session or in other words after the initiation of psychotherapy, patients were followed up every two weeks for 10 sessions. In each session, the severity of patients’ complaints was re-evaluated and recorded according to the numerical scale. Psychological examinations were also performed to monitor the patients’ progress and adjust the dosage or type of medications accordingly. Thus, the patients were monitored for 6 months during the course of study and all changes in their sensory disorders were recorded. Collected data as the mean severity of symptoms before and after treatment in each follow up session were compared using t-test to determine the response rate in these patients to psychological treatments.

**Results:**

In this study, 20 patients including 16 females (80%) and 4 males (20%) suffering from oral and maxillofacial chronic sensory disorders with no medically explained physical cause
were evaluated. The mean age of patients was 51.6±6 years (range 20-75 years). Patients’ chief complaints were pus taste in the mouth (2 cases, 10%), burning sensation in the mouth (10 cases, 50%) and pain in the oral and maxillofacial region (8 cases, 40%). Patients were suffering from these conditions for averagely 4.5 years and the most commonly involved sites were face, tongue, gums, jaws, lips, palate, teeth and in some cases the oral cavity in general (Figure 1).

A total of 12 subjects (65%) had received previous treatments such as tooth extraction, changing the prosthesis, antibiotic therapy, use of mouthwash, nerve surgery and dental implantation before entering the study. However, none of these treatments were effective. During psychological counseling, 7 psychiatric disorders were detected in these patients as follows: Masked depression in 9 cases (45%), retard depression in 2 cases (10%), involuntional melancholia in 2 cases (10%), somatization disorders in 3 cases (15%), hypochondriasis in 2 cases (10%) and brain atrophy in one case (5%). Some underlying conditions such as old age (over 60 years of age), educational problems, immigration, job dissatisfaction, relatives’ diseases, family issues, unwanted pregnancy, loneliness and death of close relatives were also found. The results regarding the changes in the severity of symptoms after receiving 11 sessions of psychotherapy showed that the mean severity score of patients’ symptoms in the first session before the onset of treatment was 4 on a 0-5 numerical scale. The maximum and minimum scores reported were 5 and 3, respectively. This score dropped to 1.1 in the 11th session. This finding revealed that psychotherapy was able to significantly improve patients’ condition (P=0.000)(Figure 2).

Figure 1- Frequency of the involved sites in patients

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Figure 2- Changes in patients’ mean severity of symptoms during various counseling sessions

Figure 3: Comparison of the mean severity score of symptoms in males and females during counseling sessions
Another issue investigated in the present study was the comparative evaluation of the rate of response to treatment in both genders. The mean score for severity of symptoms was 3.94 before and 1.25 after the treatment in female patients. These rates were 4.25 and 0.5, respectively in male patients and the difference between before and after scores was statistically significant in both sexes (P=0.001, P=0.031) (Figure 3).

Table 1: Comparison of the mean severity score of symptoms in patients with various psychological disorders

<table>
<thead>
<tr>
<th>Type of psychological disorder</th>
<th>Severity of symptoms before treatment</th>
<th>Severity of symptoms in the final counseling session</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masked depression</td>
<td>4</td>
<td>0.88</td>
</tr>
<tr>
<td>Depression</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Agitated depression</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Involutional melancholia</td>
<td>3.5</td>
<td>1</td>
</tr>
<tr>
<td>Somatozitation disorder</td>
<td>3.33</td>
<td>1.5</td>
</tr>
<tr>
<td>Hypochondriasis</td>
<td>4</td>
<td>1.2</td>
</tr>
<tr>
<td>Brain atrophy</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

Discussion:

Medically unexplained sensory disorders in the oral and maxillofacial region mostly occur in adults and most cases are in their forties to sixties (5,6). These conditions are more commonly seen in females because women in this age range usually experience menopause and suffer decreased secretion of estrogen resulting in vasomotor imbalance followed by episodes of depression and anxiety. Furthermore, women usually have less tolerance against daily life problems and are exposed to more stress during their life time compared to men. All these factors can justify the greater prevalence of these conditions among females (2,7). In the present study, the mean age of patients was approximately 52 years and 80% of subjects were females which is in accord with Ong and Yap studies (8,9). In Our study, patients were suffering from sensory conditions for 4.5 years. This rate was reported to be between 9 months to 3 years in the Lamey and Browing studies (10,11). In terms of the most commonly involved sites, face, tongue and gums were the most frequently involved sites in the present study which is in agreement with the findings of Vickers and Mongini (12,13). Presence of various degrees of psychological disorders has been demonstrated in patients suffering from unexplained oral and maxillofacial sensory disorders in studies by Maland, Manfrendini and Hampf (14-16). In the majority of relevant studies including ours, depression was the most common psychological disorder. Of the few studies conducted on this subject in Iran, we can mention a study by Honarmand et al, who showed that general anxiety disorder and severe depression were present in 63.2% and 38.6% of patients with myofacial pain dysfunction syndrome (which is actually a chronic pain with psychological origin), respectively (17). Despite the mentioned studies, the correlation between chronic sensory disorders and depression has yet to be clearly identified. It has to be figured out whether depression in patients with chronic sensory disorders is due to the presence of an unpleasant feeling or depression plays an etiologic role in development of chronic sensory conditions. However, considering the presence of pathophysiologic reactions mentioned in the introduction section, it seems that the second theory is more accurate.
Nonetheless, the majority of researchers have emphasized the need for psychotherapy in patients with unexplained oral and maxillofacial sensory conditions (18,19). But, not many studies have evaluated the circumstances of such treatments which may be due to the fact that these treatment plans are usually not accepted by patients (2). In the current study, patients reported a significant reduction in the severity of their symptoms after completion of the treatment course which was usually associated with prescription of an anti-depressant along with a tranquilizer. Anti-depressants regulate the release of brain neurotransmitters including NE and 5-HT and control the effect of the descending pathways on thalamus and spinal cord. These medications exert their positive effect on this group of patients as such (20,21). This study also revealed that response to treatment was the highest in patients with involutional melancholia and masked depression. However, it should be mentioned that since the number of patients suffering from different psychological disorders was not the same we cannot cast a definite judgment in this respect. But the present study results can be the subject of future studies in this regard. The abovementioned finding can be justified by the fact that evolutinal melancholia is a type of depression that mostly involves patients in the age range of 50-55 years who had a previously successful life but have developed psychological problems as the result of events like losing a close relative. Response to treatment in these patients is usually higher because they have had a strong character in the past. It has been confirmed that response to treatment is better in patients who have a stronger character and vice versa. That is the reason why treatment is more difficult in patients suffering from somatoform disorders especially hypochondriasis (4,7).

**Conclusion:**

This study showed that in patients suffering from medically unexplained oral and maxillofacial sensory disorders, the severity of symptoms significantly decreased after psychological treatments. Similar studies on larger sample sizes need to be performed to further confirm the findings of the current study. Such studies can initiate a movement towards bridging psychology and dentistry because human beings are biopsychosocial creatures and this fact has to be considered during diagnosis and treatment of every condition.

**References:**