

# The Incidence of Myofacial Pain Dysfunction Syndrome among Patients with a History of Recurrent Aphthous Ulcers

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**Abstract- Background:** The etiology of TMJ disorder is often multifactorial and may be due to , stress , jaw malocclusion , habitual activities including bruxism, postural dysfunction, trauma and inflammatory conditions

**Objective :** The etiology of TMJ disorder is often multifactorial and may be due to , stress , jaw malocclusion , habitual activities including bruxism, postural dysfunction, trauma and inflammatory conditions

**Method :** A seventy nine patients (35 male , 44 female) with a history of recurrent oral ulceration . oral ulceration were evaluated for the presence of myofacial pain dysfunction syndrome .the mean age was 23+- 2 years old.helkimo index used for the scoring of signs of myofacial pain dysfunction syndrome .the same method was used for the control group

**Results:** The statistical analysis for these 3 subgroups according to the value of helkimo index was highly significant with the increase of the scores toward the increase of number of ulcers per month.

**Conclusions :** This study concluded that patients with recurrent ulcerations are more susceptible to have myofascial pain dysfunction syndrome because of altered chewing pattern.

## I. INTRODUCTION

Any disorder in different parts of masticatory system particularly in muscles, temporomandibular joint TMJ and its related structures can lead to pain and dysfunction in temporomandibular joint.<sup>(1,2)</sup>

The most common cause of orofacial chronic pains is myofascialpain dysfunction syndrome MPDS. It also leads the patient to seek treatment due to some other problems than pain due to tooth and supporting structure diseases.<sup>(3,4)</sup>

MPDS is a psychological disorder which include the muscles of mastication and may results in pain, limitation in jaw opening, joint noise, jaw deviation during closing and opening the mouth and tenderness in touching one or more masticatory muscles or their tendons<sup>(5)</sup>

The etiology of TMJ disorder is often multifactorial and may be due to , stress ,jaw malocclusion , habitual activities including bruxism, postural dysfunction, trauma and inflammatory conditions.<sup>(6,7)</sup>TMJ disorders are more commonly seen in females as compared to males and usually in the age range from 20-40 years<sup>(6)</sup>.

Shermanpresented that TMJ pain dysfunction syndrome was a misnomer because the disorder was primarily related to masticatory muscle spasm and usually there are no pathologic

changes in the joint, he suggested the substitute term myofascial pain dysfunction syndrome MPDS<sup>(7)</sup>.

Recurring oral ulcers are among the most common problems seen by clinicians who manage diseases of the oral mucosa. There are several diseases that should be included in the differential diagnosis of a patient who presents with a history of recurring ulcers of the mouth, including RAS (recurrent aphthous stomatitis), Behçet syndrome, recrudescant HSV infection, and recurrent oral EM<sup>(8)</sup>.

To the best knowledge of the researchers, this is the first study that describe the relationship between recurring oral ulcers and myofascial pain dysfunction syndrome .

The aim of this study is to find the role of recurrent ulcers on altering the chewing pattern in the patients and the possible correlation with the incidence of myofascialpain dysfunction syndrome.

## II. MATERIALS AND METHODS

A seventy nine patients (35 male , 44 female) with a history of recurrent oral ulceration . oral ulceration were evaluated for the presence of myofacial pain dysfunction syndrome .the mean age was 23± 2 years old .the history of ulceration was considered for at least one ulcer per monthrecurrence.helkimo index used for the scoring of signs of myofacial pain dysfunction syndrome .the same method was used for the control group that was consisted of 80 persons ( 40 male , 40 female) with a mean age of 19± 3 years.

The scores of helkimo index ranges from 0 to 25 points and the severity of the disease is related to the scores of the index as the follow:

0 points = Dysfunction group 0 = clinically symptom free =Di0

1-4 points = Dysfunction group 1 = mild dysfunction = Di I

5-9 points = Dysfunction group 2 = moderate dysfunction =Di II 10-13 points = Dysfunction group 3 = severe dysfunction =Di III

15-17 points = Dysfunction group 4 = severe dysfunction = Di III 20-25 points = Dysfunction group 5 = severe dysfunction = Di III

### III. STATISTICAL ANALYSIS

The analysis of data was performed by using a Megastat (Version 9.4 2005) computer program . Results were expressed as mean ± standard deviation S.D . Independent unpaired student t-test was used to analyze the differences between infertile and control groups .

### IV. RESULTS

Table 1 show the statistical results of helkimo index scores in both control and study groups . there was a significant difference between both groups with more myofacial pain dysfunction symptoms in the study group.

**Table 1 : mean and standard deviation of helkimo index for control and study groups**

	Control (M±SD)	Study (M±SD)
helkimo index	2.62 ± 3.54 *	9.23 ± 6.28 *

\*Significant difference at p<0.01

**Table 2 : Mean and standard deviation of helkimo index between patients subgroups classified according to duration of ulceration /month**

	>1/m (M±SD)	1/m (M±SD)	<1/m (M±SD)
helkimo index	16.64 + 6.33 *	9.5 + 3.81 *	3.86 + 3.44 *
helkimo index	16.64 + 6.33 *	9.5 + 3.81 *	3.86 + 3.44 *

\* Significant difference at p<0.01

The study group was subdivided into three groups according to the duration of ulceration (> one ulcer /month, one ulcer/ month and < one ulcer / month).

The statistical analysis for these 3 subgroups according to the value of helkimo index was highly significant with the increase of the scores toward the increase of number of ulcers per month.

### V. DISCUSSION

In this study we found an increase incidence of sings and symptoms of myofacial pain dysfunction syndrome among a

group of patients with recurrentaphthous ulceration and the reasons for this increased incidence could be the altered chewing pattern in such patient due to burning sensation and discomfort that related to the ulcers which obligate the patient to chew on the other side for several days.

The altered chewing pattern was found to be the 3rd most common factor (stress was the 1st factor and occlusal disharmony was the 2nd factor) as etiological factor for temporomandibular problems<sup>(9)</sup> .

The more was the number of ulcers per month the more was the severity of the pain dysfunction syndrome and this may be due to stress and disability that coincide with multiple and prolonged mouth ulceration <sup>(5)</sup> .

### VI. CONCLUSIONS

This study concluded that patients with recurrent ulcerations are more susceptible to have myofascial pain dysfunction syndrome because of altered chewing pattern.

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