ORIGINAL ARTICLE

CONTENTS

Clinical characteristics of temporomandibular disorders in a sample of Iraqi patients

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ABSTRACT

Aim: To evaluate the symptoms and indicators that people with TMD experience and encourage them to seek treatment at an academic oral medicine clinic.
Materials and Methods: The study includes temporomandibular joint patients who visited the oral medicine clinic at the University of Baghdad's College of Dentistry between October 2021 and May 2022. The information was gathered from temporomandibular joint patients' medical records.
Results: In the research herein, 323 patients in total were included, females 234(72.4%) and 89(27.6%) males, the patient's mean age was (31.38 ± 14.085), and there was no discernible gender difference in mean age. In this study, the most prevalent temporomandibular joint signs and symptoms were temporomandibular joint clicking 73.6% with no significant difference between females and males. In comparison, dislocation is the least prevalent and the most prevalent muscle spasm was the masseter muscle with a percentage of 50.4%) while the sternocleidomastoid muscle is the least one.
Conclusions: The research results demonstrated a significant prevalence of temporomandibular joint disorder and the necessity of preventing it to improve the overall well-being of people in general.

KEY WORDS: Temporomandibular joint pain, muscle spasm, clicking

Wiad Lek. 2025;78(1):143-147. doi: 10.36740/WLek/197186 DOI

INTRODUCTION

The term "temporomandibular joint" (TMJ) originates from the bilateral synovial dynamic articulation act between the condylar process of the mandible below and the squamous region of the temporal bone of the skull above. The articular disc is situated in the space between these two bones. This joint is distinct because of its form, structural features, and bilateral joint that works as a single unit [1]. Temporomandibular joint disorder (TMD) has been recognized as a common orofacial pain. In 1983, the American Dental Association (ADA) first used the abbreviation "TMD" to describe a group of conditions marked by symptoms such as discomfort in the mastication muscles, preauricular area, or temporomandibular joint (TMJ); the sound produced by the TMJ when the jaw is functioning (audible); Abnormal or limited range of jaw movement [2]. There are no international standards, there are disparities in the types and quality of evaluation techniques used to estimate and report TMD, and there have been several published epidemiological studies on the prevalence of TMD in young people from different demographic groups, the prevalence of TMD ranging from 9.8% to 80% [3]. TMD's multifaceted etiology is presently understood to include systemic, genetic, parafunctional habits, trauma, mental stress, and occlusal variables. However, none of these criteria has consistently shown to outweigh the others [4]. The most common musculoskeletal disorders that lead to physical discomfort and impairment are TMDs [5].

TMD seriously affects the patient's quality of life, affecting work activities, studies, sleep, appetite, and eating habits. Additionally, the condition may worsen over time [6]. To enable medical professionals to collaborate and get a better awareness of the disease's prevalence in the general community, a deeper comprehension of TMD's symptoms and indicators is required [7]. The purpose of this study was to find out exactly how prevalent TMD symptoms were among a sample of Iraqi patients who consulted the oral medicine clinic at the University of Baghdad's College of Dentistry.

AIM

To evaluate the symptoms and indicators that people with TMD experience and encourage them to seek treatment at an academic oral medicine clinic.

Table 1. Comparison of the patients' mean ages

	Female	Male	P-value
Mean age	30.848 ± 14.146	32.842 ± 13.212	P> o.o5

MATERIALS AND METHODS

This study included TMJ patients who visited the oral medicine clinic at the University of Baghdad's College of Dentistry between October 2021 and May 2022. The information was gathered from TMJ sufferers' medical documents which included: patients' demography, self-reported complaints, the period from the onset of TMD symptoms to the visit, clinical signs/symptoms (TMJ pain, clicking, trismus, bruxism, dislocation, deviation and headache) seen at first presentation of patients. The patient's history, significant tooth wear, the presence of discomfort or tenderness in the muscles upon awakening, the patient's claims of teeth grinding while they sleep, and the patient's perceptions of themselves of stiffness during the day are all used to make the diagnosis of bruxism. Muscles of mastication were examined and the affected muscle with spasm was recorded. Version 18.0 of the SPSS program (SPSS Ins, Chicago, IL) will be used for statistical analysis. The independent T-test and the Chi square test were applied to express the results, which are given as mean SD and percentage. Statistical significance was defined as a p-value of less than 0.05.

RESULTS

There were 323 patients in total in this retrospective analysis, and their mean age was (31.38 ± 14.085), (Table 1) illustrates that there was no statistically significant variation in the mean age by gender, with 234(72.4%) females and 89(27.6%) men.

Temporomandibular joint (TMJ) clicking was the most common indication and symptom of TMJ dysfunction 73.6%, followed by TMJ pain 71.8%, Headache 59.4%, Bruxism 51.3%, Deviation 29.1%, Trismus 22.6% and the least one is Dislocation 12.3% however, no significant difference between females and males, while there was significant difference with deviation and highly significant difference with headache between females and males as shown in (Table 2).

The most prevalence of muscles spasm was the masseter muscle with percentage 50.4% followed by both temporalis and medial pterygoid with percentage 35.6%, Lateral pterygoid with percentage 47.3% and the least one was Sternocleidomastoid muscle with percentage 12.6%. There was no significant difference between females and males, while there was a significant difference with only temporalis muscle as shown in (Table 3).

DISCUSSION

This study's results display that a larger percentage of patients were female is consistent with earlier researches [8-12]. The possibility that hormonal and social variables have a role in this phenomenon might support this. With regard to gender, female hormones would be crucial in the development of TMD in women, which could be responsible for the peak of dysfunctions at the fertile age. Another reason why women are more common in the current study is because women may seek treatment more frequently than men, which might account for their higher proportion [13-15]. The results indicated that there were no statistically significant variations between men and females concerning the higher prevalence of TMD affected people at mean age (31.38 ± 14.085), this agrees with another study that found no difference found in gender regarding the age [16]. The most impacted age range, taking into account both genders, may be connected to the person's reproductive phase, thus maybe the hormone aspect is important in this regard [17]. The most common TMD symptom in the current research was clicking, with no gender difference; this is consistent with previous studies [18] that discovered that when their temporomandibular joint is moving, patients either complain of discomfort or pops, clicks, or other sounds [19-20]. Many epidemiological investigations have been demonstrated that variety of subjective symptoms and physical indications of mandibular dysfunction are frequently present, in random populations, there has only been a very tiny sex difference documented. The headache and deviation is more in female this is agree with other studies [21-22], this study has been showed that the most prevalence muscle spasm involved was masseter followed by both temporalis and medial pterygoid muscles and this is consistent with recent research showing a strong link between oral parafunctions and discomfort in the masticatory muscles. The sensation of discomfort or pain in the masticatory muscles increased when parafunctional behaviors were present [23-24]. It has been reported that approximately 50% of all TMDs are myogenic in origin; the masticatory muscles' myofascial discomfort is more usually brought on by stress [25]. Stress, anger, and disappointment are examples of emotional factors that can lead to oral habits like bruxism, which increases the activity of the masticatory muscles, particularly the masseter and temporal

Table 2. TMJ signs and symptoms

TMJ symptoms	Female n (%)	Male n (%)	Total n (%)	P value
TMJ pain	182 77.7%	50 56.17%	232 71.8%	0.031*
Clicking	168 71.7%	70 78.6%	238 73.6%	0.73
Trismus	49 20.9%	24 26.9%	73 22.6%	0.829
Bruxism	116 49.5%	50 56.1%	166 51.3%	0.758
Dislocation	22 9.4%	18 20.2%	40 12.3%	0.979
Deviation	80 34.1%	14 15.7%	94 29.1%	0.00296*
Headache	170 72.6%	22 24.7%	192 59.4%	0.0003**

*P < 0.05
**P < 0.001

Table 3. Muscles spasm

Muscles spasm	Female n (%)	Male n (%)	Total n (%)	P-value
Lateral pterygoid	112 47.8%	41 46.06%	153 47.3%	0.455
Medial pterygoid	90 38.46%	25 28.08%	115 35.6%	0.108
Masseter	120 51.28%	43 48.31%	163 50.4%	0.407
Temporalis	95 40.5%	20 22.4%	115 35.6%	0.009*
Sternocleidomastoid	29 12.3%	12 13.4%	41 12.6%	0.636

*P < 0.05

muscles [26]. The muscle which controls the position of the head while chewing, the sternocleidomastoid, had the lowest prevalence. Patients with asymmetry in the occlusion may also have an imbalance in the muscle's activity [27].

CONCLUSIONS

In this study the most prevalence TMJ signs and symptoms was TMJ clicking 73.6% with no significant difference between females and males while dislocation is the least prevalence and the most prevalence of muscle spasm was the masseter muscle with percentage 50.4%, while sternocleidomastoid muscle is the least one. The results revealed a significant frequency of TMD among population and the significance of preventing it in order to improve the overall well-being of people in general.

ABBREVIATIONS

TMD: Temporomandibular joint disorder
ADA: American Dental Association
TMJ: Temporomandibular joint

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CONFLICT OF INTEREST

The Authors declare no conflict of interest

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A – Work concept and design, B – Data collection and analysis, C – Responsibility for statistical analysis, D – Writing the article, E – Critical review, F – Final approval of the article

RECEIVED: 01.02.2024
ACCEPTED: 10.12.2024

CREATIVE COMMONS 4.0