

CLINICAL MANIFESTATIONS OF TEMPOROMANDIBULAR JOINT DYSFUNCTION IN PATIENTS WITH FREE-END EDENTULOUS SPACE

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INTRODUCTION

The most common pathology in clinical orthopedics that affects adult population is dentition issues localized in various parts of the dentition [1–6]. The worst thing here — from the topography view — is free-end edentulous space, which, in case of lacking timely treatment will develop into masticatory muscle and temporomandibular joint (TMJ) pathology [7–12].

Aim of study

To identify the major clinical symptoms of masticatory muscle and TMJ pathologies, and to determine their prevalence in patients with free-end edentulous space.

MATERIALS AND METHODS

The study involved 280 patients with free-end edentulous space, of them 160 (57.1%) being females, with another 120 (42.9%) males aged 24–65. Through diagnosing the TMJ dysfunction we identified the maximum value of the mouth opening at vertical, lateral, and frontal mandibular movement; the type and the steadiness of the mandibular movement; pain symptoms in the TMJ and in the masticatory muscles at palpation and at various movements; the presence and the degree of articular noise.

RESULTS OF STUDY

Studying mandibular movements allowed identifying their limit at maximum mouth opening in 42.9%

of the patients, while in 28.6% of them the maximum opening was reduced to 25–37 mm, and in another 14.3% of the patients that value was below 25 mm. 57.1% of the patients had mandibular vertical movements within the normal values (38–56 mm).

Restricted lateral mandibular movement was registered in 42.9% of the patients, whereas 32.2% of them had lateral movements values now exceeding 5–9 mm, and in another 10.7% — less than 5 mm. In 57.1% of the patients, lateral movements were within the normal range (10–11 mm).

The frontal (protrusional) movement of the mandible was restricted in 14.3% of the patients, including 10.7% of the patients who had the respective value in between 3–5 mm, while 3.6% of the patients had it below 3 mm. In 85.7% of the patients the mandibular movement forward was within the full range (5–7 mm).

The asymmetric nature of the mandible movements relative to the midline at the mouth opening was observed in 21.4% of the patients. At the same time, 17.8% of the patients had the mandible shifting to the right or left in the initial phase of the mouth opening, and then returning to the midline. In 3.6%, the mandible shifted to the side without returning to the midline, and in the final phase of the mouth opening, it featured a shift to the side by more than 2 mm. In 78.6% of the patients, no mandible movements asymmetry was identified, while the mandible lateral shift did not exceed 2 mm.

A pain response from the TMJ during mandibular articulation was to be observed in 17.9% of patients, while in 10.7% of the patients it was observed with one mandibular movement, and in 7.2% of the patients — with two or more movements. 81.1% of the patients manifested no pain symptoms.

Pain symptoms through mandible articulation which localized in the masticatory muscles were observed in 17.9% of the patients. In 82.1% of the patients, no signs of pain were registered when the masticatory muscles were not moving.

The lateral and distal palpation of the TMJ produced pain symptoms in 17.9% of the patients. At the

same time, 10.7% of the patients had mild pain symptoms, while in another 7.2% of the cases pronounced soreness in the TMJ was registered. 81.1% of the patients reported no pain or discomfort at palpation.

The masticatory muscles palpation was painful in 17.9% of the patients. At the same time, as a rule, painful palpation of one to three masticatory muscles was determined. Painful response was more often observed at palpation of the external pterygoid and masticatory muscles. Less frequently, pain was reported in case of temporal muscles palpation. Painless palpation of the muscles under examination was observed in 82.1% of the patients.

Articular noise in the TMJ was registered in 35.7% of the patients. At auscultation, articular noise revealed crunch, friction, and clicking sounds. In 64.3% of the patients, auscultation showed uniform and soft sounds, with no signs of pathological articular noise.

CONCLUSIONS

The above shows that in patients with free-end edentulous space, the leading clinical symptoms of the TMJ and masticatory muscles pathology include restricted maximum mouth opening at vertical, lateral and anterior movements of the mandible; asymmetry of mandibular movements at mouth opening; pain symptoms in the TMJ and masticatory muscles through palpation and various mandibular movements; articular noise.

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