

Conclusions. The results show that amelogenin is effective, and can be used by dentists during dental treatment.

Lysenko A., Mamedov A.

**RESEARCH OF THE MASTICATORY MUSCLES USING
ELECTROMYOGRAPHY IN FUNCTIONAL DISORDERS OF THE
TEMPOROMANDIBULAR JOINT**

Kharkiv National Medical University
(Department of Dentistry)

Research advisor: Assistant professor, MD Nikonov Andrey.
Kharkiv, Ukraine

Introduction. To day surface electromyography (EMG) is used in dentistry as an objective method of research of functional disorders of the temporomandibular joint (TMJ) and masticatory muscles.

The aim of the research was to study the EMG indices among patients with dysfunction of the TMJ.

Materials and methods. A group of patients consisting of 10 people, 5 of whom had symptoms of TMJ dysfunction, another 5 people were a comparison group with an intact dentition. An EMG analysis of the masseter muscles and temporal muscles was performed, which are the main muscles involved in the chewing process and are available for superposition of surface electrodes. To register the muscle biopotentials, the computer myograph "M-TEST Neuro" was used. EMG registration was carried out using functional samples. As a food stimulus, the cube of rye bread of yesterday's baking with an edge of 1 cm (weight approximately 1.5 g) was used equally for all studies. For the methodological basis of the study, we adopted the protocol of electromyography, proposed and applied at the Department of Orthopedic Dentistry and Implantology, UMSA (V.M. Novikov, 2009).

Results of research. In persons with an intact dentition, the EMG indices for s, m.Masseter are as follows: compression amplitude is 497 +/- 55; Compression frequency 244 +/- 4.7; Amplitude of chewing 692.7 +/- 50.5; Frequency of chewing 268 +/- 14.6; Duration of activity 335 +/- 7.8; Rest time 305 +/- 8.1; The coefficient is K 0.95. And in patients with dysfunction of the TMJ, occlusal-articulatory syndrome was observed with the following indices: bioelectric activity (BEA) 233 ms, bioelectric potential (BEP) 347.00 ms, dynamic cycle time 600.00 ms, Coefficient K 0.729, max. The amplitude of chewing is 1299.84 μ V. Arbitrary chewing on EMG records in individuals with an intact dentition is characterized by alternation of volleys of activity (BEA) and inhibition processes (BEP). BEA phases that arise during chewing are characterized by an increase in the frequency and amplitude of biopotentials, which reach the maximum values in the middle of the phase, after which their value decreases and the BEP phase changes, expressed as EMG as straight line at the isoelectric line level.

Conclusions. In persons with an intact dentition, all its structural parts function interrelated with clear boundaries between the BEA and BEP sites. In the study group with dysfunction of the TMJ EMG, the study showed that the average time of the dynamic cycle increased and BEA on average to 1200.00 ms and 1700.00 ms,