VARIABILITY INDEX OF ACTIVITY OF MASTICATORY MUSCLES IN HEALTHY INDIVIDUALS WITHIN THE CIRCADIAN RHYTHM.

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Summary

The literature on patients adapt to dentures, a significant place is given to the study of the relationship between the level of adaptation and operation of the chewing muscles. In turn, the force developed by the chewing muscles will depend ultimately chewing efficiency. The study carried out to determine the patterns of rhythmic organization of human dentition system in 200 healthy subjects with predominantly daytime chronotype aged 18 - 35 years old, orthognathic bite and is based on a study of variability of masticatory muscle activity indicators for values and electromyography gnathodynamometer m.masseters within the circadian rhythm.

Keywords: dentistry, heart rate, chewing muscles

The literature on patients adapt to dentures, a significant place is given to the study of the relationship between the level of adaptation and operation of the chewing muscles. In turn, the force developed by the chewing muscles will depend ultimately chewing efficiency. Numerous studies have shown that virtually all of the body's biological indicators are dependent on biological rhythms. Some authors assign circadian rhythms major role in determining the oscillatory processes of the body and say that circadian rhythms are the factors that determine the physiological, mental, intellectual condition of the body. [1.2] It is known that for each body there is a period of time, which corresponds to a state of increased activity and during this period the body or the system is ready for the greatest impact of factors external and internal environment. [3.4]

The study carried out to determine the patterns of rhythmic organization of human dentition system in 200 healthy subjects with predominantly daytime chronotype aged 18 - 35 years old, orthognathic bite and is based on a study of variability of masticatory muscle activity indicators for values and electromyography gnathodynamometer m.masseters within the circadian rhythm. [5.6]

Studying changes gnathodynamometer values and EMG amplitude of the period from 8 to 20 hours showed the presence of shear muscle activity values of 16.00 (to functionally dominant chewing side 245 ± 12.8 N, 62.8 ± 1339 mV and non-dominant side of 211 ± 2, 3 H 1282 mV ± 56.4) compared to 8.00 in the morning by measuring (by chewing functionally dominant side 217 ± 2.3 H 64.3 ± 1,125 mV and non-dominant side H 1.7 183 ± 988 ± 44.2 mV). Also indicate a change in muscle activity values to 20.00 - 12.00 compared with a decline of activity up to 224 ± 3,4 N, 1209 ± 24.5 mV to functionally dominant chewing side, and up to 188 ± 9.4 N, 1061 ± 62.3 uV on non-dominant side. [7.8.9.10]

Thus, the data analysis showed that the activity of the masticatory muscles is subject to rhythmical vibrations and has a clear circadian organization, characterized by maximum performance and electromyography gnathodynamometer from 12 to 16 hours in patients with predominantly chronotype day. Obtained in the evaluation phase of the functional status of the masticatory level of dental system data suggest that it reflects a change in the functional interaction of the occlusal surfaces of teeth-antagonists.

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