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SPECIFICS OF OCCLUSION DISTURBANCES IN ADULTS WITH DISTAL OCCLUSION DUE TO DENTITION DEFECTS

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Occlusion factors at distal occlusion caused by dentition defects play a leading role in the development of the temporomandibular joint pathology, which is due to its close connection with the neuromuscular apparatus of the dentition system as well as the nature of the occlusal contact [1–6]. In this regard, knowing the specific features of occlusion disorders in adult patients with distal occlusion due to dentition defects appears to be quite a relevant issue.

Aim. To identify specific features of occlusion disorders and their dynamics through treatment in adult patients with distal occlusion caused by dentition issues.

Material and methods. A survey was performed involving 47 patients (age 20–50) who were undergoing orthopedic treatment for distal occlusion due to dentition defects. The occlusion examination was carried out in the oral cavity and on the diagnostic jaw models using the Bio-Art Equipamentos Odontologicos Ltda articulator, which followed by their analysis and calculation of the occlusiogram index (OKG) by N.H. Khamitova.

Results and discussion. The occlusion analysis showed that 91.8% of the patients had premature occlusal contacts, including 42.6% in the conventional occlusion; 63.9% — in the anterior occlusion, 34.4% — on the laterotrusive side; 19.7% — on the mediotrusive side. At laterotrusive movement of the lower jaw, only 11.5% of the cases were identified to have group contact of the teeth on the working side; the canine contract was identified in 14.7%, while another 8.2% of the patients had mixed contact of the teeth. 65.6% of the patients revealed pathological occlusion at laterotrusive movement of the lower jaw. The occlusiogram index was 38.50 ± 3.50 conventional units. Moving the lower jaw to the front was carried out with functional-guiding orthodontic devices. The outcome of restoring the occlusal disorders was the normalized

relationship of the dentition in static and dynamic occlusion, with establishing *canine guidance*, as well as *canine protection* or *group guiding function* on the latero-trusive side, and lack of premature occlusal contacts. The second stage implied prosthetics.

Due to the treatment, premature occlusal contacts were eliminated in all cases. The occlusiogram index went up from 38.50 ± 3.50 to 71.29 ± 1.90 conventional units ($p < 0.05$). The *canine guidance*, the *canine protection* and the *group guiding function* were restored in 85.2% of patients.

Conclusion. Given the above, in adult patients, distal occlusion caused by dentition defects facilitates the development of more severe occlusion disturbances — there is a decrease in the number of antagonizing teeth pairs as well as in the occlusal contacts area; a disturbed teeth joining in the static and dynamic occlusions, while the *canine guidance*, the *canine protection* and the *group guiding function* are affected, too. The orthopedic treatment resulted in restored occlusal relations of the dental rows as well as led to an increase in the occlusiogram index up to 71.29 ± 1.90 conventional units ($p < 0.05$), which showed improvement in the parameters that point at optimal occlusal relations.

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FUNCTIONAL STATUS OF MASTICATORY MUSCLES AT OCCLUSION DISTURBANCES ACCOMPANIED WITH DISPLACED MANDIBLE

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Occlusion disorders accompanied with a displaced mandible lead to a change in the tem-poromandibular joint topography and the function of the masticatory muscles affecting their co-ordinated activity. The functional disorders severity in the masticatory muscles, their nature as well as the dynamics through the treatment can be reliably controlled via electromyographic study [1–6].

Aim. To carry out an evaluation of the electromyographic activity of the masticatory muscles in adults with dentition defects complicated with distal occlusion, depending on the muscular-articular dysfunction degree.

Materials and methods. The study implied identifying functional status of the masticatory muscles in 180 patients aged 20–55, who had dentition defects complicated with distal occlusion. The comparison group included 107 people with an orthognathic bite and with no defects in the dentition. The degree of functional disorders was determined subject to M. Helkimo's clinical dysfunction index. The electromyo-