POSITION OF OCCLUSION PLANE IN PATIENTS WITH MESIAL OCCLUSION BEFORE AND AFTER ORTHODONTIC TREATMENT

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In recent years, orthodontists have been paying increasing attention to the occlusal plane. It is common for the upper and lower teeth, therefore, it is often used as a guideline for determining the violation of the interposition of the apical bases of the jaws (Jacobson) and the interposition of the teeth (L.S. Perzin, G.L.Kuznetsova, I.V.Popova). According to the literature, the direction of the occlusal plane is unequal at different anomalies of occlusion.

The purpose of our study is to study how the level of the occlusal plane changes in patients with mesial occlusion before and after treatment.

Materials and methods of research- The method of quadrilateral analysis according to R. Di Paolo. Studied 62 TRG of the head, performed in the lateral projection, 31 patients with mesial occlusion, before and after treatment, aged from 6 to 22 years. On each TRG, an occlusal plane was drawn through the occlusal surfaces of the upper and lower first molars and through the hillocks of the first premolars in the upper and lower jaws, respectively, heights M and N were obtained. The following points were determined: point- (A) the projection of the deepest point on the anterior contour of the apical basis of the upper jaw on the SpP plane; point M posterior nasal spine; point B - projection of the deepest point on the anterior contour of the apical base of the mandible onto the mandibular plane (MR); point J is the projection of the distal surface of the last molar on the lower jaw onto the mandibular plane (MR). The anterior (A) and posterior (P) heights of the gnathic part of the facial cranium, as well as the distance from the spinal to occlusal plane and from the occlusal to the mandibular plane in the anterior and posterior sections, were measured. According to R. Di Paolo, there is a relationship between the heights of the gnathic part of the facial cranium, which is expressed by the following formulas: I = P / (I + A / P); f = A / (I + A / P). The proposed parameters were studied on each head of the TRG and measurements were carried out using the proposed formulas. The data obtained was statistically processed.

Research results. Identified violations in the front upper and rear upper height. In patients with mesial occlusion prior to the start of orthodontic treatment, the direction of the occlusal plane is different from normal (calculated by the formula). A more horizontal direction of the rear upper height and a decrease in the front height are observed. However, if before treatment the rear height (N = 19 mm) was 5 mm (24 mm) more than the calculated one, and the front height (M = 23 mm) was 8.5 mm less (14.6 mm), then after treatment of the rear height (N = 21.19 mm) was less than the norm by 4 mm (17 mm), and the front height (M = 24.25 mm) was almost equal to the norm of 25 mm (0.75 mm).

Conclusion: In patients with mesial occlusion, examined before and after orthodontic treatment, posterior rotation of the occlusal plane occurs and its direction is much closer to normal.

The occlusal plane is common to the upper and lower teeth, therefore, it is often used as a guideline to determine the violation of the interposition of teeth. The aim of the study is to study how the level of the occlusal plane changes in patients with mesial occlusion before and after treatment. By the method of Di Paolo, lateral teleroentgenograms of 31 patients were studied before and after the treatment of mesial occlusion. It was revealed that in patients with mesial occlusion in the course of treatment, the direction of the occlusal plane is normalized.