Some metods of treatment bite patologies in children age

Olimov Siddiq Sharipovich
Safarova Mavludabony Jamolovna
s.olimov5@gmail.com
Bukhara Medical Institute named after Abu Ali Ibn Sino

Annotation. In recent decades, tooth-jaw system anomalies and pathologies in different countries of the world have been increasing from year to year, and these pathologies, according to some authors(Khamadeeva and together avtori 2018, Persin and together avtori 2019), rank third after caries, parodontological diseases in terms of prevalence among dental diseases. According to the data cited by the World Health Organization, TJA was found among 50% of European children and adolescents, 83% of us 6-7-year-olds, 90% of Russia 6-7-year-olds, and among the remaining age contingents 41.8-61.28%, and during our study among 67.11% of 6-13-year-olds at the time of the examination, also the percentage of prevalence of TJA varies in different age groups. In particular, 70.8% occur among 6-9 age contingents, 79.3% between 10-13, and 68.5% between 14-16.(Gontarev, 2013, Yormukhamova 2021). As age grows in children and adolescents, several etiological causes, such as milk and permanent teeth disrupting the exit sequence, result in an increase in the amount of diseases cited above, increasing the demand for orthodontics and special orthodontic treatment. The following article provides a summary of some of the claimed methods of mesial Bite, a pathology of sagittal bite.

Key words. Tooth-jaw patologies, bite patologies, mesial bite.

The Bruckl device has traditionally been used in domestic orthodontic practice to eliminate the habitual displacement of the lower jaw in patients with deep reverse incisor overlap and the absence of a sagittal gap between the incisors. Structurally, it is a plate on the lower jaw with Adams clasps on the molars, an inclined plane for vestibular deviation of the upper incisors and a vestibular arch in the area of the lower front teeth, providing fixation and, if necessary— retraction of the lower incisors. In some cases, the device was combined with an orthodontic cap, a chin sling and an extraoral rubber rod, which enhanced its functional effect.

The principle of operation of the device is based on the fact that when the teeth are closed, the cutting edges of the upper incisors are located on an inclined plane and, under the influence of its surface, deviate vestibularly, contributing to the restoration of correct incisor relations. Clinical observations show that with proper preparation and compliance with the patient's recommendations, a positive effect can be achieved within 14-20 days.

However, the traditional design of the device has a number of significant drawbacks. Firstly, changing the tilt of the upper incisors requires regular correction of the height of the inclined plane: if necessary, the doctor grinds off the plastic, and with hypercorrection, adds a new layer of fast—hardening material. This leads to high labor costs and increased consumption of dental materials. Secondly, with untimely visits to the doctor, incisor dysocclusion may develop. In addition, the device is ineffective with a pronounced sagittal fissure and exerts an exclusively protrusive effect on the upper incisors, which is often insufficient for complex correction, especially if transversal changes are necessary. An additional limitation is the less reliable fixation of the structure on the lower jaw compared to similar devices located on the upper jaw, which is due to the anatomical features of its alveolar process [3].

The Basharova device refers to removable orthodontic structures used to correct mesial bite by influencing the position of the front teeth and the functional restructuring of muscle balance. The design of the device is a plate on the lower jaw, while its base does not adhere to the mucous membrane of the alveolar process in the area of the lower incisors and canines. In the front part of the base, metal folding stainless steel tapes with a thickness of 0.4 mm, a width of 3-5 mm and a length of 60-70 mm, located at right angles, are fixed. The free ends of the bands are brought to the vestibular surface of the lower front teeth, where a retraction vestibular arch with U-shaped bends is installed on them.

The mechanism of action of the device is based on the transmission of the contraction force of the perioral muscles through the folding bands and the arch: this ensures the vestibular movement of the upper front teeth and the simultaneous oral direction of the lower incisors and canines. In this way, the restoration of the correct incisor overlap and the improvement of the maxillary ratios are achieved.

Despite its functional effectiveness, the device has several significant drawbacks. Its design is quite bulky, which reduces the comfort of wearing and may make it difficult for the patient to adapt. The device has low aesthetic qualities due to the significant number of metal elements. In addition, protruding metal parts increase the risk of injury to the oral mucosa, which limits the possibility of its widespread use in sensitive or poorly motivated patients [4].

According to the data and clinical observations of Murtazaev S.C.[5], it is advisable to treat children with class III anomalies and frontal open bite using microimplants as a support for certain cephalometric indications. The author notes that this approach is most justified with a decrease in the SNB angle of less than 80°, a positive value of the ratio of points A–B at the level of the occlusal plane exceeding the standard values, an increased maxillary angle, a decrease in the aesthetic parameters of the profile (in particular, the Z-angle of less than 75°), as well as in the presence of extrusion of the chewing group of teeth..

According to the researcher, the use of microimplants in these clinical situations makes it possible to reduce the duration of orthodontic treatment, restore proper occlusion of the dentition and improve the aesthetic characteristics of the face in children with mesial bite.

Conclusion: It is worth noting that in the claim of prikus pathologies in children, it is better to use modern methods, and not traditional ones. In this regard, it is very important to take into account the medical and psychological state in which prikus pathologies have been identified. The effectiveness of treatment is higher if the living conditions of children and adolescents are approached from the medical psychological side, studying the family environment.

Literature

1. Хабилов НЛ, Шомухамедова ФА, Арипова ГЭ, Муртазаев СС, Насимов ЭЭ, Мирсалихова ФЛ. Ортодонтия с детским зубным протезированием. Ташкент: Adabiyot Uchqunlari; 2016. 212 с.

2. Руденко ВП, Галаева АИ. Распространенность и структура зубочелюстных аномалий среди детей школьного возраста Карагандинской области. CHRONOS. 2022;6(11(73)).

3. Olimov SSh, Safarova MZh. Myographic studies of musculoarticular TMJ dysfunctions complicated by medial occlusion in children. Central Asian Journal of Medical and Natural Sciences. May–Jun 2022. p. 390-393.

4. Safarova MZh. Myographic studies before and after treatment of TMJ dysfunctions complicated by dental and maxillofacial anomalies. European Multidisciplinary Journal of Modern Science. 2022 Mar 21. p. 356-360.

5. Постников МА. Оптимизация ортодонтического лечения детей с мезиальной окклюзией в период смены и после смены зубов [автореферат диссертации д-ра мед. наук]. Самара; 2016. 47 с.

6. Персин ЛС, и др. Ортодонтия. Диагностика и лечение зубочелюстно-лицевых аномалий и деформаций. Москва: ГЭОТАР-Медиа; 2015. 640 с. ISBN: 978-5-9704-3227-3.