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НОВЫЙ ДЕНЬ В МЕДИЦИНЕ
NEW DAY IN MEDICINE**

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MODERN APPROACH TO ELIMINATION AND TREATMENT OF ETIOLOGICAL EXTERNAL FACTORS OF MAXILLARY PROTRUSSIONS IN CHILDREN

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✓ *Resume*

Currently, the development of a program of measures for the effective treatment and prevention of high jaw protrusions in orthodontic dentistry and its implementation in practice serve as a leading factor in restoring the normal physiological state of chewing. Orthodontic treatment of high jaw protrusions is one of the urgent problems that need to be solved to eliminate this type of bite deformity, as well as transverse inconsistencies in the dentition. In the treatment of patients, there are various ways to eliminate dental deformities, depending on the patient's age and individual characteristics.

Keywords. protrusions of the upper jaw, occlusal deformities, dentition, anomalies and deformities.

БОЛАЛАРДА ЮҚОРИ ЖАҒ ПРОТРУЗИЯЛАРНИ ЭТИОЛОГИК ТАШҚИ ОМИЛЛАРИНИ БАРТАРАФ ЭТИШ ВА ДАВОЛАШГА ЗАМОНАВИЙ ЁНДАШУВ УСУЛИ

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✓ *Резюме*

Ҳозирги кунда ортодонтик стоматологияда юқори жағ протрузияларини самарали даволаш ҳамда олдини олиш бўйича чора тадбирлар дастурини ишлаб чиқиш ва унинг амалиётга тадбиқ этиш чайновнинг нормал физиологик ҳолатини тиклашда етакчи омил бўлиб хизмат қилади. Юқори жағ протрузияларини ортодонтик даволаш ушбу турдаги окклюзион деформацияларни ҳамда тиш қаторларидаги трансверзал номувофиқликни бартараф этиш ечимини қутаётган долзарб муаммолардан биридир. Беморларни даволашда беморнинг ёшига ва унинг индивидуал хусусиятларига қараб тиш қатори деформацияларини бартараф этишнинг турли хил усуллари мавжуд.

Калит сўзлар. юқори жағ протрузиялари, окклюзион деформациялар, тиш қаторлари, аномалия ва деформациялар.

СОВРЕМЕННЫЙ ПОДХОД К УСТРАНЕНИЮ И ЛЕЧЕНИЮ ВНЕШНИХ ЭТИОЛОГИЧЕСКИХ ФАКТОРОВ ВЫСОКОГО ВЫПЯЧИВАНИЯ ЧЕЛЮСТИ У ДЕТЕЙ

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✓ **Резюме**

В настоящее время разработка программы мероприятий по эффективному лечению и профилактике высоких выступов челюсти в ортодонтической стоматологии и ее внедрение на практике служат ведущим фактором восстановления нормального физиологического состояния жевания. Ортодонтическое лечение высоких выступов челюсти является одной из актуальных проблем, требующих решения для устранения этого типа деформаций прикуса, а также поперечных несоответствий в зубных рядах. При лечении пациентов существуют различные способы устранения деформаций зубного ряда, в зависимости от возраста пациента и его индивидуальных особенностей.

Ключевые слова. выступы верхней челюсти, окклюзионные деформации, зубные ряды, аномалии и уродства.

Relevance

Currently, the development of a program of measures for the effective treatment and prevention of maxillary protrusions in orthodontic dentistry and its implementation in practice serves as a leading factor in restoring the normal physiological state of chewing. Orthodontic treatment of maxillary protrusions is one of the urgent problems awaiting a solution to eliminate this type of occlusal deformations and transverse inconsistency in the dentition. In the treatment of patients, there are various methods of eliminating dentition deformations, depending on the age of the patient and his individual characteristics. In eliminating the etiological factors of maxillary protrusions and effectively treating them, special attention should be paid to the peak of maxillary growth, since the long-term results of orthodontic treatment depend on this factor. When planning treatment for patients with jaw deformations accompanied by the appearance of maxillary protrusions, it is necessary to take into account the direction of growth of the maxillary bones and age-related changes in the child. Orthodontic treatment of patients with maxillary protrusions is aimed at changing the growth of the maxillary bones. However, in patients with significant occlusion pathology, individual orthodontic appliances should be used to achieve optimal treatment results. Treatment in adult patients with maxillary protrusions has its own characteristics, which depend on a number of factors. Bone tissue at this age is less flexible and more difficult to restore under the influence of orthodontic appliances, so the duration of orthodontic treatment leads to an increase in the number of visits compared to children.

Effective treatment of maxillary protrusions Stepanov G. V. (2016) in scientific sources of foreign authors states that the distalization device is the method of choice for patients who cannot use absolute help in the form of an orthodontic mini-screw and is associated with the distalization of the first molars of the upper jaw. It is used as a device for distalization of the lateral group of maxillary teeth, including the distal palatal apparatus. The main elements of this orthodontic device: lingual tubes, palatal clamp, spears and tubes, are divided into the Nance device. The original device is modified and divided into two-sided connecting systems, which are attached to the acrylic palatal button and fixed with brackets to the first or second premolar teeth. Orthodontic coatings or rings are installed on the second premolar teeth and the first molar teeth of the upper jaw. The Nance button attachments are formed on the palatal surface of the orthodontic bands of the first molars and second premolars. The second premolars are connected to the Nance button in this device. Also, this device has a Nickel-Titanium ring surface parallel to the occlusal plane and is connected to the orthodontic bands of the first molars and the Nance button, and the effective features of the device include these.

In addition, there are methods for treating maxillary protrusions with a bracket system. The Gojgaria palatal arch, designed to move the first permanent molars of the upper jaw, is protruded by 2 mm and has the property of unilateral and bilateral action. The method of distalization of the maxillary premolars is carried out using clamps. The device has vestibular and palatal parts. The vestibular part is in the form of a chain, the length of which is determined by clinical indicators, and consists of an orthodontic arch bent at an angle of 90 ° to stabilize the elastic tension. One end of the chain is placed on a bracket attached to the teeth distal to the vestibular surface, and the other end has the property of connecting with the hooks of the locking device.

The palatal part of this device consists of a bracket, a metal button with an arc hole fixed to the tooth distally from the palatal side. A partial spring is installed between the bracket and the button, on which a nitinol spring is placed (Nabiev N. V. (2017) is a known method of distalization and rotation of the

first molars of the upper jaw using an apparatus introduced into practice by the author. The pendulum device consists of: orthodontic coatings (rings), a spring and a palatal acrylic button. Orthodontic coatings are manufactured by stamping with a simple or thin-walled (thickness 0.15-0.18 mm) sheet according to the generally accepted technology for the production of coatings. Orthodontic rings can be made from stamped orthodontic coatings (cut along the chewing surface), chromium-nickel tape with a thickness of 0.15-0.2 mm and a width of 3.5 to 6 mm, and standard blanks. Orthodontic rings are installed on the first molars of the upper jaw. The orthodontic arch structure is a reinforcing element. A palatal acrylic button is its supporting part.

Another orthodontic device recommended by the authors for the treatment of maxillary protrusions is a modified orthodontic device for moving the maxillary canines. According to Atakov M. A., a removable plate is fixed, hooks are inserted into its shield for traction. The Corkhouse device is intended for the treatment of maxillary protrusions. Its technical parameters depend on the type of protrusion. The main element common to all types of devices is metal rings or rings for incisors. For a vertical bar with a hook, the metal rings open distally, are connected to the mesial surface and the lateral surface by a thread or rubber. The author shows in his studies the effective properties of the orthodontic device, in which the contraction force of the ligatures stretched between the hooks leads to the approximation of the teeth.

aimed to treat patients with maxillary protrusion using Infant Trainer, Trainer K1, Trainer K2, and Aligners, which have unique characteristics that differ from the methods used in practice by the above-mentioned authors .

The aim of the study is to improve the modern approach to the elimination and treatment of etiological external factors of upper jaw protrusions in children .

Research object: 182 children aged 4 to 18 years old with maxillary protrusion were recruited from the Orthodontics Department of the Bukhara Regional Specialized Children's Dentistry Center in 2021-2023.

Results and analysis

In our scientific research, one of the effective methods of treating maxillary protrusions was the use of orthodontic appliances Infant Trainer, Trainer K1, Trainer K2, and Eliner. **Group I:** In the period of eruption of deciduous teeth, 34 children aged 4 to 6 years were treated with orthodontic appliances Infant Trainer, Trainer TK2, and patients in the control group were treated with orthodontic appliances for the treatment of maxillary protrusions with a removable plate base.

Group II: Aligners and a modified version of the Twin Block appliance, a plastic-based screw-type appliance, were used to treat maxillary protrusions in 83 pediatric patients aged 7 to 13 years during the period of alternating occlusion.

Group III : 65 children aged 14 to 18 years were treated with a non-removable orthodontic appliance, Trainer B, for the treatment of maxillary protrusions during the period of eruption of permanent teeth , and a non-removable orthodontic appliance, Braces, for the treatment of control group patients.

Group I In the treatment of maxillary protrusions in 34 children aged 4 to 6 years during the period of eruption of deciduous teeth, the Trainer For Infant , specially designed for children aged 4-6 years, was used to eliminate harmful habits such as thumb sucking, infantile swallowing, and incorrect chewing. This can lead to impaired development of the maxillofacial system and incorrect positioning of deciduous teeth, which in turn leads to deformation of the alveolar arch in the deciduous and permanent dentition. The earlier harmful habits are eliminated, the better the program will serve as a leading tool for early detection and prevention of the development of deformities of the child's maxillofacial system.

in patients of group I under investigation . It is very easy to use and allows you to get rid of such harmful habits from childhood. It also stimulates the tone of the circular muscles of the mouth. This orthodontic appliance helps to fully perform chewing movements to stimulate myogymnastics and jaw growth. The active chewing process of the Trainer For Infant stimulates the natural development of the jaw bones and facial muscles, thereby ensuring the normal physiological state of the chewing apparatus. In patients of group I participating in our study group, the Trainer TK2 orthodontic appliance was used in severe forms of high protrusion . The Trainer TK2 orthodontic appliance is fundamentally different from other orthodontic appliances in its advantages and ease of use. The Trainer TK2 orthodontic appliance allows you to restore nasal breathing and myofunctional conditions. It is made of soft, flexible material, which is why it is convenient for the patient. This orthodontic appliance adapts to any shape of the dental arch and any malocclusion, it is easy to keep it in your mouth during sleep. The transition to the K2 model is recommended only when the child can keep the K1 in his mouth at night and breathe through the nose all the time. Bad habits such as incorrect posture and tongue dysfunction, as well as mouth breathing, are often

not recommended. At the same time, if we do not start timely treatment of the protrusion of the upper jaw during the period of primary occlusion, it will interfere with the growth of the lower jaw, and if it is not corrected in a timely manner, this will lead to a disproportion in the development of the facial skeleton, as well as a tight fit of the teeth.

We set out to use braces, which are widely used in modern orthodontic dentistry, in the treatment of maxillary protrusions that occur during permanent occlusion. The brace is attached to the tooth enamel with the help of special composite materials. If the installation of braces is necessary for medical or aesthetic reasons, it is necessary to approach the choice of its specific type responsibly. The requirements for the brace system in patients undergoing treatment are that the design should not cause inconvenience in life and communication, worsen discussion and make communication difficult. The brace used in patients is attached to each tooth separately and is designed to transfer forces from the arch to the tooth, under its pressure helps to bring the teeth and tooth rows into a normal position.

Conclusions

Depending on the etiological factor of the protrusion of the upper jaw and the severity of the disease, taking into account the milk, replacement, permanent occlusion, complex treatment of functional disorders, elimination of harmful habits, reduction of the duration of treatment and the number of visits to the orthodontist by 2-3 times was achieved. The economic efficiency of treatment as a result of early diagnosis of pathological changes in the deformations of the maxillofacial system allows restoring the normal physiological state of chewing efficiency of patients, preventing complications, and completely eliminating the clinical signs of the disease.

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