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COMBINED METHOD OF TREATMENT OF SKELETAL MESIAL OCCLUSION

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Abstract
Proximal obstruction is one of the most complex maxillofacial anomalies characterized by a violation of the jaw position.1 There are difficulties in choosing a treatment method: surgical or traditional orthodontics. Patients with complete skeletal growth require combined corrective surgical treatment. The adaptation of this method leads to a violation of the aesthetics of the face and some TRG indicators. This article presents a clinical example of the treatment of patients with proximal occlusion of the dentition.

Keywords: proximal occlusion, corrective and surgical treatment.

Introduction:
Proximal occlusion of the dentition, or Class 3 according to the Engl classification, is one of the most complex maxillofacial anomalies 1.

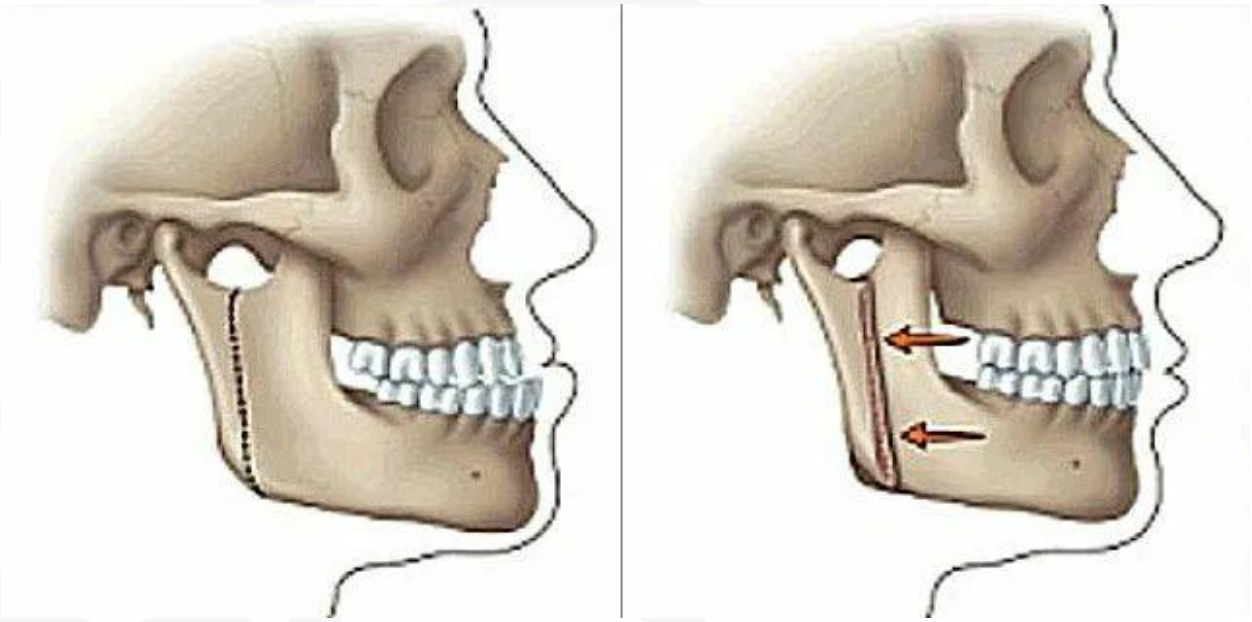
Angle Class III

W.R. According to Proffit, the prevalence of class 3 anomalies is 4% [1], F. According to Y. Khoroshilkin - 5-6% [3] and depends on the studied population [5]. Malocclusion of the 3rd class is characterized by a violation of the position of the jaw in the space of the skull (pro/retrognathia) or a mismatch in the size of the jaw (macro/micrognathia). In most cases, this is a genetically determined malformation of the maxillofacial region. Issues of diagnosis and treatment planning continue to cause controversy among orthodontists and maxillofacial surgeons.

Most authors agree with the complexity of differential diagnosis when choosing a treatment method: surgical or traditional correction [2, 7]. When determining the treatment method, orthodontists rely on skeletal standards when calculating lateral telegenograms, but the characteristics of teeth do not always serve as a good guideline for solving the problem of facial disharmony, since the soft tissues covering the bone structure are very variable [4]. In the 20th century, in the 90s, the American surgeon Arnett G.W. Another diagnostic tool was proposed that would allow surgeons to determine the choice of methods for correcting malocclusion – analysis of the size of the head in soft tissues (STCA), relative to true vertical surfaces, this method allows quantifying many aspects of the facial profile and aesthetics of the entire face [6]. During this period, the growth of the upper jaw does not matter, and the lower jaw continues to grow back and forth in accordance with its growth potential, therefore, the growth of the lower jaw during puberty is of great importance in the pathogenesis of closely related obstruction. For example, the ability to control the growth of the mandible with a chin bandage does not always change the genetically inherent growth potential and size of the mandible. The main task of treating patients with proximal occlusion is to achieve harmonious facial aesthetics and stable functional occlusion.[2] Combined orthodontic surgical methods are used in adult patients, since the growth of the facial skeleton has already been completed (the first mention of surgical treatment of inferior macronathia dates back to the first half of the 20th century).E.Engle described in the literature the first cases of surgical treatment in combination with orthodontic devices and received positive results). Indications for this therapy are patients' dissatisfaction with facial aesthetics, as well as some objective data from the analysis of the telegenogram (TRG) of the head [1, 6]. Some clinical examples from our practice serve as examples of the effectiveness of such procedures. The Department of Orthodontics of the Faculty of Pediatric Dentistry of Samarkand State University is responsible for receiving patients with complaints about facial aesthetics and dissatisfaction with malocclusion. Department of Orthodontics, Faculty of Pediatric Dentistry, Samarkand State University.I was approached by an 18-year-old teenager. It turned out from the medical history that at the age of 10 he underwent orthodontic treatment using a removable device, but without success. The patients underwent the first comprehensive examination, which included an analysis of TRG in a lateral projection, control and diagnostic models, OPTG, photographs of the face and oral cavity. Based on the analysis of laboratory tests and additional research methods, the diagnosis was made: pericardial obstruction of the dentition, reverse sagittal gap. The analysis of the lateral TRG showed that the upper jaw occupies the correct position in the space of the skull (84

gr.The lower jaw is enlarged by 15 mm and, in addition, occupies an anterior position relative to the base of the skull (87 gr. - prognathia). The vertical direction of the mandible growth and the enlargement of the lower third of the face were determined. The position of the incisors of the upper jaw was normal, and the incisors of the lower jaw were in the retracted position (80 gr.).

Taking into account aesthetic complaints, as well as significant macrognosia of the mandible, the patient was offered a combined orthodontic surgical treatment, which included the following stages: 1. Joint consultation of the patient by an orthodontist and a maxillofacial surgeon, development of a combined treatment plan. 2. Therapeutic oral hygiene. 3. The stage of preoperative correction, which consisted in decompensation of the existing pathology of the alveolar process. 4. Preoperative planning, the manufacture of splints for the correct positioning of the jaw during surgery. 5. The surgical stage is osteotomy of the mandible, in order to restore the mandible and reduce its size. 6. The stage of postoperative orthodontics. 7. Retention... At the preoperative orthodontic stage, a non-removable orthodontic technology (bracket system) was installed on the upper and lower jaws. At this stage, the teeth are aligned, the shape of the dentition is normalized, and their congruence is created. Much attention was paid to the location of the incisors of the upper and lower jaws. The lower incisors, which occupied a retracted position before treatment, were placed in a more precise position. When changing the position of the incisors, the reverse sagittal gap increased, the profile of the soft tissues of the face worsened, and the patient was warned before starting treatment.



The duration of this stage was 10 months. After completion of orthodontic training, patients underwent repeated diagnostics, including analysis of trg, control and diagnostic models, OPTG, photographs of the face and oral cavity. According to the data of the TRG of the head in the lateral projection, we simulated the surgical movement of the lower jaw and studied the change in the profile of the soft tissues of the face after surgery based on facial photography. The criteria for preparing the patient for the surgical stage were a comparison of jaw models with constructive bite in class 1 articulators according to Engl classification, and the correct position of the incisors of the upper and lower jaws according to TRG data. Then the patient was sent to the surgical department of NPO Bonum for osteotomy of the mandible, during which the surgeon had already formed an ideal occlusion. 2 months after the operation, the patient returned to the orthodontist for further treatment (postoperative stage). At this stage, measures were taken to achieve a tight contact of the crack with the nodule (the use of inter-cylinder elastic elements). The duration of the period was 2 months. The treatment of this patient was completed by the manufacture of non-removable clamps for both jaws in accordance with standard procedures.

The total duration of treatment was 14 months. A comparison of cephalometric parameters before and after shows that the chosen treatment method in this patient allows to improve the profile of the soft tissues of the face, as well as the ratio of jaw and bite.

To conclude: Thus, the method of combined corrective surgical treatment of skeletal abnormalities is a pathogenetic therapy in patients with full jaw growth, which allows achieving the desired aesthetic result, ideal occlusion of teeth, which creates conditions for long-term and proper functioning of the dental system.

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