

**REPEATED ORTHODONTIC TREATMENT (ORTHODONTIC RETREATMENT):
ELIMINATING THE CONSEQUENCES OF FAILED PRIMARY ORTHODONTIC TREATMENT**
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Repeated orthodontic treatment after an unsatisfactory primary correction requires an individual choice of diagnostic and biomechanical tactics, especially in the presence of an open bite and Class II according to Engle. The work aimed to present a clinical approach to repeated correction of the indicated dentofacial anomaly using skeletal support on orthodontic microimplants and to assess changes in concomitant symptoms of temporomandibular joint dysfunction. The clinical observation of a 21-year-old patient is described, in whom two years after the primary orthodontic treatment, occlusion disorders, pain in the temporomandibular joint area and headache persisted. Based on the clinical examination results, photo protocol and analysis of available archival radiological documentation, an open bite and Class II occlusion according to Engle were established. Repeated correction was performed using a fixed orthodontic technique in combination with bilateral distalization of the upper dentition on microimplants. After treatment completion, the open bite was closed, the incisors were physiologically overlapped vertically, and Angle Class I was achieved on both sides. At the same time, the temporomandibular joint pain and headache disappeared. The clinical result indicates the possibility of effectively correcting a complex combination of anomalies without tooth extraction and surgical intervention, provided individualized planning and proper skeletal support are provided. At the same time, the data obtained from one clinical case do not provide grounds to establish a cause-and-effect relationship between orthodontic correction and the elimination of symptoms of temporomandibular joint dysfunction.

Key words: open bite, orthodontic microimplants, skeletal support, distalization of the upper dentition, temporomandibular joint dysfunction.

Connection of the publication with planned research work.

The study was carried out on the author's own initiative and is not related to the implementation of planned research work.

Introduction.

In global clinical practice, the number of adult patients seeking orthodontic care is steadily increasing. At the same time, the proportion of requests for repeated orthodontic treatment after an unsatisfactory result of primary orthodontic correction is also increasing. Despite the generally high level of satisfaction with treatment results, which exceeds 91%, about 2.8–4.0% of patients report severe dissatisfaction with the result obtained, while approximately 22% assess it as only partially satisfactory. These data indicate a clinically significant group of patients who need additional diagnostics and repeated orthodontic treatment [1].

According to the results of the study by L. Chow et al., who made a comparative analysis of the profiles of adult patients undergoing primary treatment and retreatment, the main reasons for unsatisfactory results of primary orthodontic therapy were poor-quality primary treatment, insufficient retention, diagnostic and tactical errors, as well as biological changes associated with further growth of the facial skeleton and age-related restructuring of the dentofacial system. Among the less common reasons, the authors noted transverse deficiency, secondary malocclusion after periodontal damage, insufficient patient adherence to the retention regimen, and degenerative changes in the temporomandibular joint (TMJ) [2]. One factor that determines the long-term stability of orthodontic treatment results and affects the risk of retreatment is the effectiveness of the retention stage. A systematic review by M. Jedliński et al. demonstrated that fixed retention failures are multifac-

torial and largely depend on adherence to the retention protocol [3].

Retreatment of patients who have developed secondary malocclusions after primary orthodontic treatment is particularly challenging. One of the most challenging clinical variants is open bite combined with Angle class II. Open bite is one of the least stable forms of malocclusion, characterized by a multifactorial etiology and a high rate of recurrence after treatment, particularly because the tongue cannot adapt its position after completion of active orthodontic therapy [4]. At the same time, in some cases, post-treatment open bite may be associated with biomechanical errors during primary orthodontic treatment, which requires a thorough analysis of the causes of the unsatisfactory result when planning retreatment [5].

In the orthodontic retreatment clinic, orthodontic microimplants (temporary anchorage devices, TADs) have significantly expanded the possibilities for correcting complex malocclusions without orthognathic intervention. Skeletal support provides controlled tooth movement without reciprocal loading on the anchor teeth and significantly reduces dependence on patient cooperation [6]. According to M. Bayome et al. and T. Raghis et al., the use of orthodontic microimplants for distalization of the upper dental arch in patients with Angle class II provides an average distal movement of the first molars of about 4 mm [7, 8]. In addition, C. Ceratti et al. demonstrated that using skeletal support significantly reduces anchorage loss compared with traditional distalization methods on a dental support [9]. In turn, L. Smahliuk, M. Dmytrenko, and A. Shevchyk also confirm the high efficiency of devices with palatal support on microimplants, demonstrating distal movement of the first molars by an average of 4.6 ± 1.5 mm [10].

Of particular clinical interest is the possible relationship between malocclusion and TMJ functional status.

Available data suggest an association between Class II malocclusion and TMJ dysfunction, although a causal relationship has not been definitively established. According to a meta-analysis by L. Huang et al., the prevalence of TMJ dysfunction among patients with Class II is about 40%. In contrast, among individuals with various types of malocclusion, the prevalence is about 43% [11]. At the same time, in a pilot study by G. Fichera et al., Class II skeletal structure was found in 48% of patients with TMJ dysfunction versus 10% in individuals without it, which gave the authors reason to consider Class II as a possible predisposing factor, rather than a direct cause of the development of dysfunction [12].

Despite the existence of separate publications devoted to the use of TADs for distalization, the etiology of open bite and the possible relationship of occlusion anomalies with TMJ dysfunction, the available literature lacks clinical reports that would comprehensively cover the diagnosis of the causes of unsatisfactory results of primary orthodontic treatment, retreatment of a presumably post-treatment open bite using bilateral distalization of the upper dentition on orthodontic microimplants and assessment of functional and aesthetic treatment results. This determines the relevance of the clinical case presented.

The aim of the study.

To demonstrate the feasibility of correcting open bite and Class II according to Angle by means of bilateral distalization of the upper dentition using orthodontic microimplants and to evaluate the dynamics of temporomandibular joint dysfunction symptoms.

Object and research methods.

The object of the study was a clinical case of a 21-year-old patient who sought consultation and orthodontic treatment with complaints of pain in the temporomandibular joint, headache and malocclusion that remained after previous orthodontic treatment. From the anamnesis, it is known that two years before the application, the patient completed a course of primary orthodontic treatment with fixed appliances at another orthodontist. Immediately after completing that treatment, an open bite developed. Regarding the pain syndrome in the TMJ area, the patient previously underwent treatment using various physiotherapy methods; however, a stable clinical effect was not achieved.

The patient's examination included: collection of complaints and anamnesis, clinical examination of the maxillofacial area and oral cavity, assessment of the functional state of the TMJ (palpation of the joint area and masticatory muscles, assessment of the amplitude and trajectory of mouth opening, presence of joint noises), photo protocol of the oral cavity in standard projections, as well as analysis of available radiological documentation performed earlier within the patient's observation.

According to the results of the examination, an open bite was diagnosed (absence of vertical overlap of the teeth in the frontal area with preserved closure of the lateral groups of teeth) and Class II according to Angle (for canines and molars). Given the nature of the anomaly, a treatment plan was developed that provided for the placement of fixed orthodontic appliances (bracket system) on both dentitions, combined with bilateral distalization of the upper dentition using orthodontic microimplants as additional skeletal support. Before start-

ing orthodontic treatment, the patient had all of her wisdom teeth removed.

The choice of treatment method was based on a comparison of alternative therapeutic approaches. Removal of premolars as a way to gain space was not considered, since the clinical situation did not require the elimination of crowding or protrusion, but rather controlled distal movement of the upper dentition. Orthognathic surgery was not considered, since an orthodontic treatment method was chosen based on the results of a comprehensive clinical and radiological examination. In this regard, orthodontic microimplants were used to implement the planned biomechanics, which provide additional skeletal support during distalization. According to J. L. Vaden et al., the use of orthodontic microimplants is an effective way to minimize anchorage loss and can be used during class II correction [13]. According to a review by T. G. Kwon et al., skeletal support open bite correction is an effective minimally invasive alternative to surgery for adult patients. It provides predictable correction of vertical occlusal malocclusions and consistent clinical outcomes [14]. The effectiveness of this approach largely depends on ensuring stable anchorage during distalization. For example, S. Soheilifar et al. [15] found that skeletal support significantly reduced anchorage loss compared to traditional intraoral methods. In addition, S. H. P. Tarigan et al. [16] emphasized that the reliability of orthodontic microimplants depends on a combination of controllable factors related to the patient, implant design, and placement technique. None of them is individually dominant, making careful adherence to the placement protocol a key condition for the predicted outcome. Given this, bilateral distalization of the upper dentition on orthodontic microimplants, combined with a fixed technique, made it possible to implement the planned treatment biomechanics.

Microimplants were placed bilaterally in the maxillary alveolar process to provide skeletal support during bilateral distalization of the upper dentition. Using skeletal support during distalization increases anchorage stability and reduces unwanted movement of the abutment teeth, as confirmed by data from sources [6; 7].

The treatment was performed in accordance with the principle of informed voluntary consent for examination, treatment, and the use of depersonalized photo and X-ray materials for scientific purposes, as well as the general bioethical principles of the World Medical Association Declaration of Helsinki [17].

Research results and their discussion.

At the time of the initial examination, the patient's oral cavity showed an open bite with a lack of contact between the upper and lower incisors in the frontal area, as well as Class II according to Angle in terms of the ratio of canines and molars (**figure 1**). Violations of occlusal contacts in the frontal area and crowding of the lower incisors were noted.

Analysis of archival radiographic documentation, including lateral cephalometric radiographs and axial slices obtained from cone-beam computed tomography (**figure 2**), allowed us to assess the relationship between the dentition and tooth position. In general, the clinical and radiographic picture did not contradict the characteristics of patients who seek repeated orthodontic treatment after an unsatisfactory result of primary therapy, as described by L. Chow et al. [2].



Figure 1 – Clinical picture of the oral cavity at the stage of examination of the patient before the start of repeated orthodontic treatment: A, B, D – front view; C, E – lateral view of the dentition.

Because the study is based on archival documentation and clinical examination, it is impossible to establish the direct mechanism of open-bite formation after completion of primary orthodontic treatment. The absence of intermediate clinical documentation does not allow us to reliably determine the etiological factor of the

occurrence of the specified complication. At the same time, clinical documentation confirms the temporal relationship between completion of the previous treatment and the appearance of an open bite. According to L. Chow et al. [2] and O. Bunta et al. [4], the formation of an open bite after orthodontic treatment may be associ-

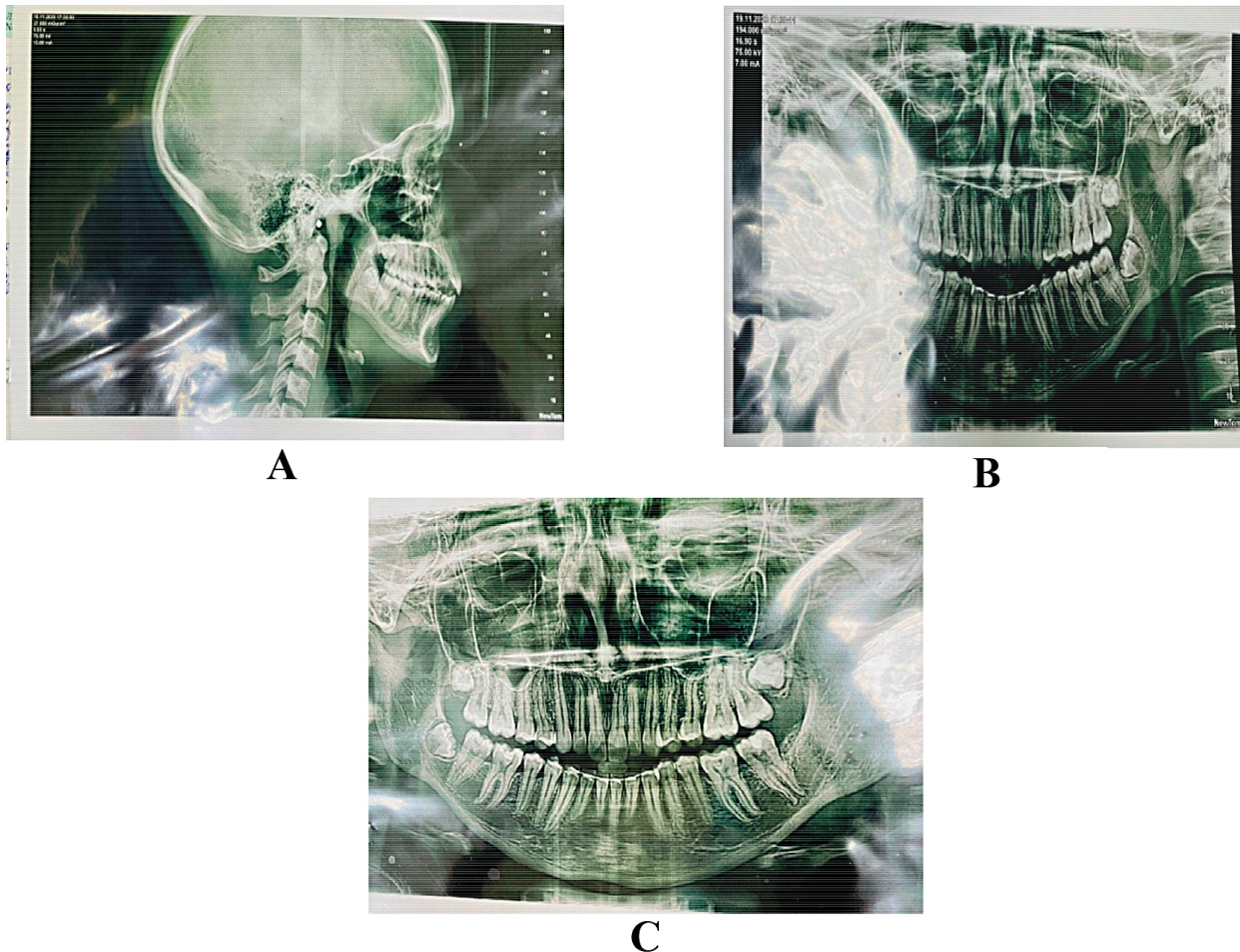


Figure 2 – X-ray examination of the patient (archival documentation provided at the consultation): A – lateral cephalometric radiograph; B, C – additional reconstructed images of the dentition of the upper and lower jaws. Patient identification data have been removed from the images.

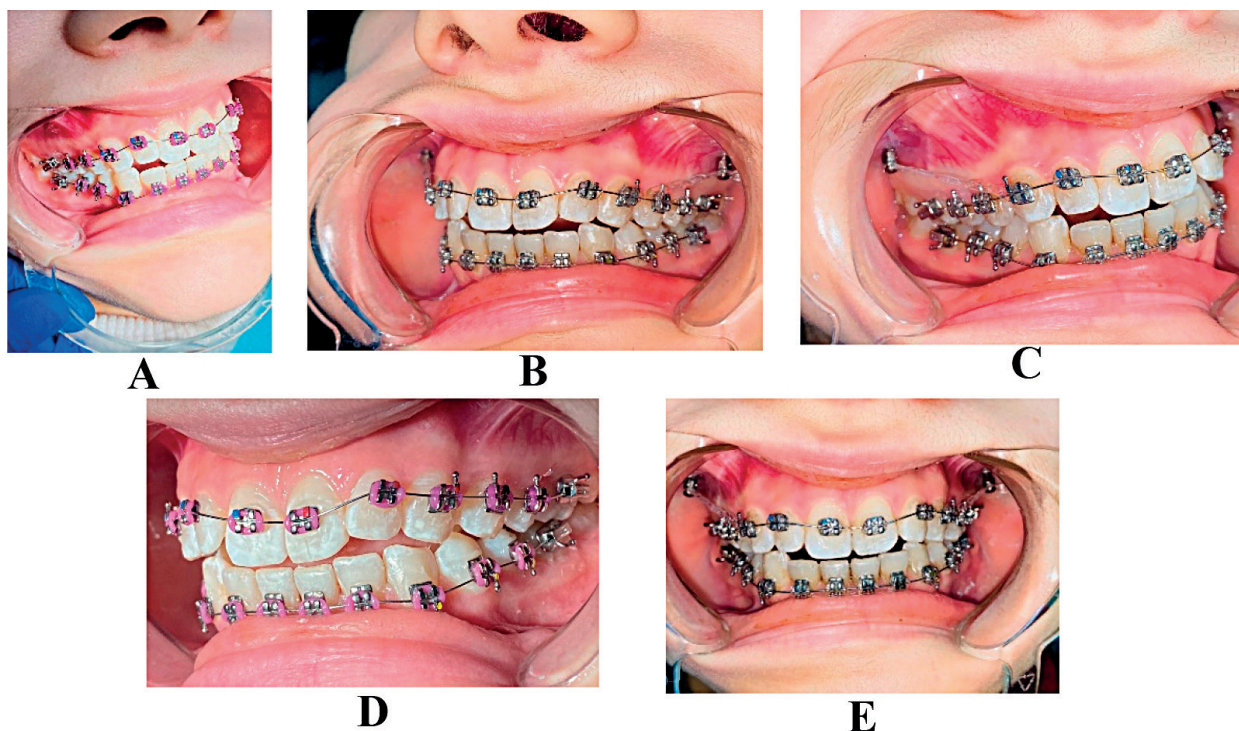


Figure 3 – Clinical course of repeated orthodontic treatment using fixed orthodontic appliances and orthodontic microimplants (TADs):
A, B, D – front view; C, E – lateral view of the dentition.

ated with the peculiarities of orthodontic biomechanics, anchorage control, retention regimen, continued jaw growth, as well as functional factors, in particular, impaired tongue function or bad habits. In the presented clinical case, none of the specified mechanisms can be confirmed or excluded based on the available documentation; therefore, a conclusion regarding the causes of open bite formation is impossible. At the same time, according to the patient, she did not have an open bite before the start of the primary orthodontic treatment. During the clinical examination, the correct position of the tongue during swallowing was also established, which does not indicate the presence of a pronounced myofunctional disorder at the time of the examination. Therefore, the clinical data obtained did not allow the

myofunctional factor to be considered a proven etiological factor in the formation of an open bite. Accordingly, the plan for repeated orthodontic treatment was based primarily on the current clinical picture and the results of a comprehensive examination.

Bilateral distalization of the upper dentition was performed using fixed orthodontic equipment in combination with orthodontic microimplants (**figure 3**). The force for distal movement of the upper dentition was applied from the microimplants through elastic traction to the elements of the fixed orthodontic apparatus, which provided absolute (skeletal) anchorage and minimized unwanted reciprocal loading on the frontal group of teeth. The microimplants were installed at such a level (height) that the traction from them caused intrusion of



Figure 4 – Clinical picture after completion of repeated orthodontic treatment:
A, D, E – lateral view in occlusion; B, C – front view in close-up.

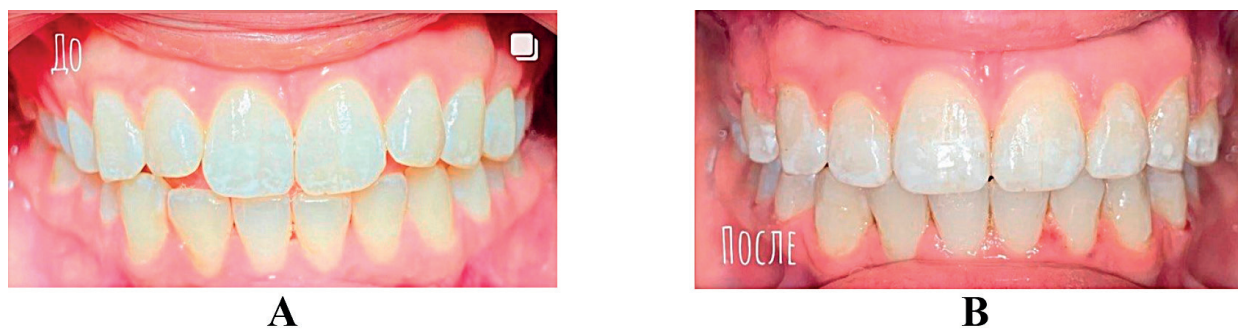


Figure 5 – Comparative photographs of the patient's frontal dentition before (A) and after (B) repeated orthodontic treatment.

the upper molars as a side effect of distalization, which caused a change in the occlusal plane and allowed the bite to be closed with minimal extrusion of the anterior teeth, which makes the treatment result long-lasting and stable. This approach is consistent with the data of M. Bayome et al. [7], as well as T. Raghis et al. [8], according to which the use of skeletal support during distalization of the molars of the upper dentition allows achieving effective distal movement with minimal loss of anchorage compared to traditional methods of distalization on a dental or mixed support, as well as with the results of L. Smahliuk et al. regarding the high efficiency of distalizers with support on microimplants in the palate [10].

After the completion of active orthodontic treatment (figure 4), the closure of the open bite was achieved, physiological vertical overlap of the incisors was formed and Class I according to Angle in terms of the ratio of canines and molars. Clinical photographs demonstrate alignment of the dentition, normalization of occlusal relationships and improved smile aesthetics. The results indicate achievement of the planned goals of repeated orthodontic treatment.

According to the results of clinical observation after the completion of treatment, the patient did not complain of pain in the temporomandibular joint and headache, which bothered her before the start of the retreatment and were not eliminated by the previous physiotherapy treatment. The achieved functional result was accompanied by stabilization of the occlusion, elimination of clinical manifestations of TMJ dysfunction and improvement of the aesthetics of the dentition.

Comparison of clinical photographs before and after repeated orthodontic treatment (figure 5) demonstrates elimination of the open bite, improved occlusal contacts in the frontal area, alignment of the frontal teeth, and improved dentition aesthetics.

The positive clinical findings are consistent with the literature on the higher prevalence of TMJD among patients with Angle class II and distal occlusion. Huang et al., the prevalence of TMJD in patients with Angle class II is about 40%, the highest rate among Angle classes of occlusion and one of the highest among the studied types of occlusal anomalies [11]. At the same time, skeletal class II is considered one of the possible predisposing factors for the development of TMJD, but G. Farronato et al. indicate only an associative, not a causal, relationship between this occlusal anomaly and the development of TMJD [18]. Although the presented clinical case achieved a positive outcome after repeated orthodontic treatment, a single clinical observation does not allow us to establish a direct cause-and-effect relationship be-

tween orthodontic treatment and the regression of TMJ symptoms. The data obtained only indicate a temporal association between the treatment and clinical improvement.

The analyzed clinical case of a 21-year-old patient is consistent with the results of the study by J. R. Miller, who described the successful retreatment of a patient with a double recurrence of open bite after two orthodontic interventions and orthognathic surgery. Recurrence of open bite was associated mainly with impaired tongue function. The author demonstrated that orthodontic microimplants, combined with myofunctional therapy, made it possible to achieve long-term stability without repeated surgical intervention [19]. At the same time, unlike the clinical case [19], the observation we present provides no data to consider impaired tongue function as the leading etiological factor of recurrence, since the corresponding functional examination was not performed.

A similar treatment approach is also presented in the clinical case of F. Le Keux and L. Frapier, who described the non-surgical correction of an post-treatment Class II open bite. The authors associated the deformity's development with the undesirable consequences of previous treatment and emphasized the importance of carefully analyzing the etiology before choosing a second orthodontic strategy [20]. In contrast, in our patient, the open bite developed after completion of primary orthodontic treatment without obvious signs of post-treatment influence from a specific orthodontic construction; therefore, the mechanism of its development remains multifactorial.

Similar conclusions are given in the clinical case of F. Martinelli, who emphasized that successful treatment of open bite in patients with class II requires individualization of therapy, taking into account not only the biomechanics of tooth movement, but also the functional state of the orofacial muscles and tongue [21]. Taken together, these clinical observations indicate that repeated treatment of open bite cannot be based on a universal algorithm. The choice of tactics should be determined by the individual characteristics of the clinical case, the results of comprehensive diagnostics and the probable factors that led to the development or recurrence of the anomaly.

The patient subsequently reported maintenance of the occlusal result; however, objective long-term stability could not be assessed because the patient currently resides in another country.

Conclusions.

The present clinical case demonstrates that bilateral distalization of the upper dentition with skeletal support

on orthodontic microimplants, combined with fixed orthodontic technique, made it possible to effectively correct the open bite and Angle Class II malocclusion that developed after an unsatisfactory primary orthodontic treatment. The applied approach ensured the achievement of a stable physiological bite and Angle class I on both sides without premolar removal and without orthognathic surgery, which indicates the feasibility of using skeletal support as a minimally invasive approach in the treatment of such clinical cases.

The obtained result was accompanied by the complete elimination of pain syndrome in the temporomandibular joint and headache, which were not amenable to physiotherapy treatment before the retreatment. However, the results of one clinical case provide grounds to state only a temporary association between orthodontic correction of occlusion and regression of symptoms of temporomandibular joint dysfunction, and do not prove their cause-and-effect relationship.

Analysis of possible causes of open bite formation after primary treatment showed the fundamental limitations of retrospective assessment in the absence of intermediate clinical documentation, which did not allow establishment of a specific etiological mechanism for this complication. Comparison of the presented observation with cases of open bite retreatment described in the lit-

erature confirmed the absence of a universal algorithm for treating such patients. Therefore, treatment choices should be based on individualized, comprehensive diagnostics that consider probable factors for relapse or post-treatment influence, as well as, if necessary, assessment of functional factors, particularly the position and function of the tongue and orofacial muscles.

Prospects for further research.

Prospects for further research primarily involve conducting prospective clinical observations in larger patient samples to confirm the cause-and-effect relationship between orthodontic retreatment of open bite and Class II, according to Angle and the elimination of symptoms of temporomandibular joint dysfunction. Another promising direction is the development of standardized protocols for functional diagnostics, particularly assessment of the position and function of the tongue and orofacial muscles, which will allow for a reasonable prediction of relapse risk and the choice of retreatment tactics. No less important is implementing a single standardized clinical documentation system at all stages of primary orthodontic treatment and the retention period, which will contribute to more reliable identification of the causes of unsatisfactory treatment results and justification of indications for retreatment.

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ПОВТОРНЕ ОРТОДОНТИЧНЕ ЛІКУВАННЯ (ОРТОДОНТИЧНИЙ РЕТРИТМЕНТ): УСУНЕННЯ НАСЛІДКІВ НЕВДАЛОГО ПЕРВИННОГО ОРТОДОНТИЧНОГО ЛІКУВАННЯ**Гасанова А.**

Резюме. У сучасній клінічній практиці зростає частка дорослих пацієнтів, яким через незадовільний результат первинного ортодонтичного лікування потрібен ретритмент. Одним із найскладніших для лікування варіантів є поєднання відкритого прикусу та II класу за Енглею із супутньою дисфункцією скронево-нижньощелепного суглоба. Водночас у фаховій літературі рідко трапляються публікації, присвячені комплексному підходу до діагностики та повторного ортодонтичного лікування таких клінічних випадків. Мета статті – показати на клінічному прикладі можливість двобічної дисталізації верхнього зубного ряду з використанням ортодонтичних мікроімплантів (TADs) при повторному ортодонтичному лікуванні після незадовільного результату первинної корекції, а також оцінити динаміку симптомів супутньої дисфункції скронево-нижньощелепного суглоба після проведеного ретритменту. Представлено клінічний випадок пацієнтки 21 рік, яка звернулася зі скаргами на порушення змикання зубних рядів, біль у ділянці скронево-нижньощелепного суглоба та головний біль, що зберігалися протягом двох років після завершення первинного ортодонтичного лікування незнімною технікою і не усувалися попереднім фізіотерапевтичним лікуванням. Проведено клінічне обстеження, фотопротокол порожнини рота й аналіз наявної архівної рентгенологічної документації. За результатами обстеження діагностовано відкритий прикус I II клас за Енглею. Повторне ортодонтичне лікування здійснювали із застосуванням незнімної ортодонтичної техніки в поєднанні з двобічною дисталізацією верхнього зубного ряду на скелетній опорі з використанням ортодонтичних мікроімплантів. Після завершення лікування досягнуто закриття відкритого прикусу, формування фізіологічного вертикального перекриття різців, I класу за Енглею з обох боків, стабілізації оклюзійних співвідношень і покращення естетики зубних рядів. Біль у ділянці скронево-нижньощелепного суглоба та головний біль, які до початку ретритменту не усувалися фізіотерапевтичним лікуванням, повністю регресували. Представлений клінічний випадок підтверджує можливість успішного повторного ортодонтичного лікування після незадовільного результату первинної корекції за умови індивідуалізованого планування лікування та використання скелетної опори на ортодонтичних мікроімплантах. Спостережувана регресія симптомів дисфункції скронево-нижньощелепного суглоба після завершення ретритменту потребує подальшого вивчення в проспективних клінічних дослідженнях для підтвердження можливого причинно-наслідкового зв'язку.

Ключові слова: відкритий прикус, ортодонтичні мікроімпланти, скелетна опора, дисталізація верхнього зубного ряду, дисфункція скронево-нижньощелепного суглоба.

REPEATED ORTHODONTIC TREATMENT (ORTHODONTIC RETREATMENT): ELIMINATING THE CONSEQUENCES OF FAILED PRIMARY ORTHODONTIC TREATMENT**Hasanova A.**

Abstract. In modern clinical practice, the proportion of adult patients requiring retreatment due to unsatisfactory primary orthodontic results is increasing. One of the most challenging treatment scenarios is the combination of an open bite and Angle Class II with concomitant temporomandibular joint dysfunction. At the same time, publications devoted to a comprehensive approach to the diagnosis and retreatment of such cases are rare in the professional literature. The purpose of this article is to demonstrate, using a clinical case, the possibility of bilateral distalization of the upper dentition using orthodontic microimplants (TADs) during re-treatment following an unsatisfactory outcome of the initial orthodontic correction, as well as to evaluate the progression of symptoms of concomitant temporomandibular joint dysfunction after re-treatment. A clinical case of a 21-year-old female patient is presented, who complained of impaired occlusion of the dentition, temporomandibular joint pain, and headache that persisted for two years after completion of primary orthodontic treatment with fixed appliances and were not eliminated by previous physiotherapy. A clinical examination, a photo protocol of the oral cavity, and an analysis of the available archival radiological documentation were performed. Based on the examination results, an open bite and Angle Class II were diagnosed. Repeated orthodontic treatment was carried out using fixed orthodontic appliances in combination with bilateral distalization of the upper dentition on skeletal support using orthodontic microimplants. After completion of the treatment, closure of the open bite, formation of a physiological vertical overlap of the incisors, Angle Class I on both sides, stabilization of occlusal relationships, and improvement of the aesthetics of the dentition were achieved. Temporomandibular joint pain and headache, which were not relieved by physiotherapy before the start of retreatment, completely regressed. This clinical case confirms the possibility of successful retreatment after an unsatisfactory primary correction, provided individualized treatment planning and the use of skeletal support on orthodontic microimplants are employed. The observed regression of temporomandibular joint dysfunction symptoms after retreatment requires further prospective clinical studies to confirm a possible cause-and-effect relationship.

Key words: open bite, orthodontic microimplants, skeletal support, distalization of the upper dentition, temporomandibular joint dysfunction.

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ВПЛИВ НИЗЬКОЇ КОМПЛАЄНТНОСТІ БАТЬКІВ НА ДІАГНОСТИКУ ТА ВИБІР ЛІКУВАЛЬНОЇ ТАКТИКИ ДІТЕЙ З РАННІМ ДИТЯЧИМ КАРІЄСОМ (КЛІНІЧНИЙ ВИПАДОК)

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Передчасна втрата тимчасових зубів у дітей із раннім дитячим карієсом є одною з причин порушення розвитку зубощелепної системи та аномалій прикусу. Особливі труднощі виникають у випадках низької прихильності батьків до лікування своїх дітей, коли своєчасна діагностика, повноцінне обстеження та проведення рекомендованих лікувальних заходів є неможливими або суттєво обмеженими. Мета дослідження – представити клінічний випадок комплексного лікування дитини дошкільного віку з множинним раннім дитячим ускладненим карієсом тимчасових зубів за умов низької комплаєнтності батьків. Проведено клінічне обстеження та лікування дитини 5,5 років із множинним раннім дитячим карієсом тимчасових зубів. Каріозні ураження класифікували відповідно до Стандарту медичної допомоги «Карієс тимчасових зубів». Інтенсивність карієсу оцінювали за індексом кп, клінічне обстеження проводили з застосуванням загальноприйнятих методів дитячої стоматології. Через категоричну відмову матері від проведення рентгенологічного обстеження та лікування дитини в умовах седативної діагностичної та лікувальної тактики були скориговані відповідно до клінічної ситуації. У дитини діагностовано множинний ускладнений ранній карієс із хронічними формами періодонтиту більшості тимчасових зубів та загостренням хронічного періодонтиту 5.1 зуба. Проведено поетапну хірургічну санацію порожнини рота під місцевою анестезією у чотири відвідування з видаленням зубів і коренів із несприятливим прогнозом та збереженням 75 зуба після повторної клінічної оцінки. Після завершення хірургічного та терапевтичного лікування дитина перебувала під диспансерним спостереженням. Через 8 місяців почалося формування раннього змінного прикусу, у зв'язку з чим пацієнта направлено на ортодонтичне лікування. Низька комплаєнтність батьків може суттєво ускладнювати діагностику, вибір лікувальної тактики та своєчасне надання стоматологічної допомоги дітям з раннім множинним ускладненим карієсом. У випадках відмови від лікування в умовах седативної поетапної санації порожнини рота під місцевою анестезією може бути ефективною альтернативою. Передчасне видалення значної кількості тимчасових зубів потребує обов'язкового ортодонтичного супроводу та подальшого диспансерного спостереження. Досягнення сприятливого функціонального результату можливо лише за умови міждисциплінарної взаємодії дитячого стоматолога, стоматолога - хірурга, ортодонта та активної участі батьків у лікуванні дитини.

Ключові слова: діти, ускладнений множинний карієс, комплаєнтність, видалення зубів, дитяча стоматологія, ортодонтичне лікування.

Зв'язок публікації з плановими науково-дослідними роботами.

Дослідження виконано в межах науково-дослідної роботи «Рання діагностика, профілактика та лікування основних стоматологічних захворювань у дітей та підлітків» (номер державної реєстрації 0123U103116).

Вступ.

Збереження тимчасових зубів до настання їхньої фізіологічної зміни є одним із базових принципів дитячої стоматології, оскільки саме тимчасовий прикус забезпечує нормальний ріст і розвиток щелепно-лицевої ділянки у дорослому житті. Передчасна втрата тимчасових зубів призводить до порушення рівноваги в зубощелепній системі, що може зумовлювати зменшення довжини зубних рядів, міграцію сусідніх зубів, порушення термінів і напрямку прорізування постійних зубів, а також формування вторинних зубощелепних деформацій та пов'язаних з ними аномалій прикусу. За значної втрати тимчасових зубів ці

тільки тимчасовий прикус забезпечує нормальний ріст і розвиток щелепно-лицевої ділянки у дорослому житті. Передчасна втрата тимчасових зубів призводить до порушення рівноваги в зубощелепній системі, що може зумовлювати зменшення довжини зубних рядів, міграцію сусідніх зубів, порушення термінів і напрямку прорізування постійних зубів, а також формування вторинних зубощелепних деформацій та пов'язаних з ними аномалій прикусу. За значної втрати тимчасових зубів ці