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Improvement of Approaches to Restorative Treatment of Pathological Tooth Erasure

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Annotation: Pathological processes of the maxillofacial region, which develop under the influence of various etiological factors and lead to a decrease in the interalveolar height, is one of the urgent problems in the clinic of orthopedic dentistry.

Keywords: pathological tooth erasure, increased tooth erasure, restorative treatment, dental restoration, occlusive disorders, functional diagnostics, comprehensive rehabilitation

Introduction. One of these factors is the increased abrasion of the hard tissues of the teeth, which belongs to the group of non-carious lesions, the prevalence of which ranges from 11.8 to 31.0% of cases of dental diseases.

The leading etiological factors in the development of this disease can be both parafunctions of the masticatory muscles and the influence of chemical and abrasive agents. The imperfection of the hardest tissues of the teeth can also be one of the reasons leading to increased abrasion.

Methods and Methodology

Physiological tooth erasure (FSD) is a natural, long-term compensated process of enamel abrasion that does not transfer to dentin [1], which is an adaptive phenomenon that helps ensure smooth sliding of the dentition rows during their occlusion of various types [2]. The adaptive nature of the revealed changes in the hard tissues of the teeth is expressed in the fact that with horizontal abrasion, the height of the crown of the teeth decreases, which compensates for the decrease in age-related functional capabilities of the periodontal [3]. It should be noted that the PS process in some conditions can develop rapidly and become pathological, which is characterized by increased loss of dental hard tissues, which leads to morphological and functional disorders [4].

Pathological tooth erasure (PSD) is a relatively rapid process accompanied by changes in dental tissues and periodontal tissues with possible dysfunction of the masticatory muscles and TMJ [5].

The integrity of the dentinoemal boundary can serve as a criterion for differentiating the FSZ from the PSZ [6].

The causes of PSZ are divided into endogenous and exogenous. Endogenous factors include metabolic disorders, hereditary predisposition, neurodystrophic and endocrine disorders, accompanied by the development and defective structure of tooth enamel and dentine [7].

The possibility of a hereditary predisposition is indicated by the frequent occurrence of this pathology in several generations, where the same form of erasure was observed [8]. In addition, PSZ occurs in some hereditary diseases [9]. Neurodystrophic and endocrine disorders have a significant effect on the pathogenesis of PSZ, causing changes in mineral (phosphorus-calcium and protein metabolism), which contributes to the development of acquired imperfections of the hard tissues of teeth [10]. PSZ can be observed in general somatic diseases, such as diseases of the gastrointestinal tract, genitourinary and nervous systems, as well as in psychiatric disorders [11].

Clinical methods of examination of patients with PSZ make it possible to find out the causes of the disease, determine the nature of the disorders, establish a diagnosis and, based on this, determine the scope of comprehensive rehabilitation, in particular, orthopedic treatment [12].

To objectively assess the condition of dental hard tissues, a number of authors use various techniques to express the prevalence and degree of abrasion with a single quantitative indicator that can be used to analyze patient groups and accurately assess the condition of individual patients.

Since there is a decrease in the height of the lower part of the face in PSZ, an important element of the clinical examination is to determine the size of the upper, middle and lower thirds of the face, as well as the occlusal height [14].

An equally important element of the examination of patients with PSZ is the assessment of occlusal contacts. For this purpose, occludograms are made that allow for comparative analysis in different age groups, analyze the dynamics of the pathological process at different stages of the disease, and evaluate the occlusal surfaces of dentures after treatment [13].

Results and Discussions

Today, the modern level of computer technology development (for example, the T-scan device, Tekscan, USA) allows for clinical monitoring of occlusion not only using articulation paper or articulation foil, but also using hardware methods. The use of articulation paper is often insufficient to carry out an adequate diagnosis and competent functionally balanced occlusal correction [15].

Due to a decrease in the height of the bite with a generalized form of abrasion of the hard tissues of the teeth, the main task of treatment is to increase the bite by restoring the lost height of the teeth by various methods and types of structures, necessarily taking into account the functional features of occlusal and mandibular joint movements [9].

For this purpose, the proposed arrangement of the bite separation device (deprogrammers) in the frontal area of the dentition, which causes maximum force in the TMJ and minimal pressure on the articular head. The distal position of the structure entails minimal force in the articular head with maximum pressure on the disconnecting structure [6].

The results of clinical observations and laboratory studies have made it possible to develop conceptual foundations for the manufacture of orthopedic structures, depending on the etiological factors of bite height reduction, which should be followed in the preparation of a treatment plan [3].

In the treatment of generalized forms of pathological abrasion of the hard tissues of teeth, positive results were obtained with the help of dentures, which significantly shorten the treatment time, restore the interalveolar height and chewing function. Treatment of complicated forms of pathological abrasion with defects and deformations of the dentition began with the restructuring of myostatic reflexes and the subsequent manufacture of dentures with additional fixation elements [7].

It is believed that the restoration of the guiding function of incisors and canines in the reconstructive treatment of PSZ, which involves determining the optimal height of the clinical crowns of the upper front teeth, provides remission of the disease in 96.3% of cases, as evidenced by the stability of odontometric parameters and the interalveolar distance [9].

For the treatment of grade I-II PSZ, direct restoration is a fairly effective treatment method, the advantages of which are the clinical performance of all work, the absence of preparation of hard dental tissues, high efficiency and aesthetics [12

For the treatment of grade III-IV PSZ, direct restoration must be combined with traditional treatment methods (crowns, bridges, and braces) [5].

In the treatment of patients with local CVD complicated by partial adentia and secondary deformities of the dentition, the use of metal titanium crowns of different thicknesses and solid-cast bridges of different thicknesses made of the same material is an alternative treatment method. The use of titanium

alloy as a structural material provides biological inertia, corrosion resistance, and increases the strength properties of dentures [2].

Conclusion

Thus, it follows from literary sources that the generalized form of PSZ is diagnosed quite often in dental practice. However, to date, many issues of diagnosis and orthopedic treatment of this disease have not been fully investigated and remain controversial. Despite the fact that there are a number of studies on this problem, they are devoted to certain aspects of the diagnosis of functional disorders in patients with generalized PSZ and are fragmentary.

List of literature:

1. Alimskiy A.V., Makeeva I.M. Epidemiology of pathological erasure of dental hard tissues. 2021. No. 100(4). pp. 34-39.
2. Arutyunov S.D., Brutyan L.A. Clinical characteristics of pathological erasure of dental hard tissues // Russian Dental Journal. 2022. No. 26(2). pp. 112-118.
3. Bulycheva E.A., Trezdubov V.N. An integrated approach to diagnosis and treatment patients with pathological tooth erasure // Institute of Dentistry. 2020. No. 88(3). pp. 54-57.
4. Gazhva S.I., Volkomorova T.V. Modern aspects of treatment of non-carious lesions of hard tissues of teeth // Medical almanac. 2021. No. 2(67). pp. 161-164.
5. Lebedenko I.Yu., Ryakhovsky A.N. Orthopedic dentistry: a national guide. Moscow: GEOTAR-Media, 2023. 824 p.
6. Maksimovskaya L.N., Kurakin K.A. Clinical and laboratory substantiation of the choice of restoration materials for pathological tooth erasure. 2022. No. 101(3). pp. 45-51.
7. Ronkin K.Z. Diagnosis of temporomandibular joint dysfunction in case of pathological tooth erasure // Dental Magazine. 2021. No. 1. pp. 28-35.
8. Khvatova V.A. Clinical gnatology. M.: Medicine, 2020. 296 p.Ahmed K.E., Murbay S. Survival rates of anterior composites in managing tooth wear: systematic review // Journal of Oral Rehabilitation. 2023;43(2):145-153.
9. Bartlett D., O'Toole S. Tooth wear: Best evidence consensus statement // Journal of Prosthodontics. 2021;30(1):20-25.
10. Dietschi D., Argente A. Restorative Management of Worn Dentition // Swiss Dental Journal. 2022;132(6):426-435.
11. Edelhoff D., Güth J.F. Digital workflows for rehabilitation of severe tooth wear // International Journal of Computerized Dentistry. 2023;26(1):37-48
12. Shomurodov ,K., Khaidarov , N., & Kamalova , M. (2021). The formation and eruption of baby teeth in children. Збірник наукових праць SCIENTIA. вилучено із
13. Khaidarov Nodir Kadyrovich, Shomurodov Kahramon Erkinovich, & Kamalova Malika Ilhomovna. (2021). Microscopic Examination Of Postcapillary Cerebral Venues In Hemorrhagic Stroke. The American Journal of Medical Sciences and Pharmaceutical Research, 3(08), 69-73.
14. Shomurodov K.E. Peculiarities of cytokine balance in gingival fluid at odontogenicphlegmon of maxillofacial area // The doctor-aspirant. - 2010. - 42(5.1). - C. 187-192.
15. Mehta S.B., Banerji S. Current concepts on the management of tooth wear // British Dental Journal. 2022;223(9):671-682.