

defektov zubnyh rjadov v kompleksnom lechenii generalizovannogo parodontita // Sovremennaja stomatologija. – 2004. – No2. – S. 64–65.

5. Danilevskij N.F. Zabolevanija parodonta / N.F. Danilevskij, A.V. Borisenko. – M.: Zdorov'e, 2000. – 461 s.

THE USE OF DENTAL IMPLANTATION IN THE TREATMENT OF A GENERALIZED FORM OF PATHOLOGICAL ABRASION OF TEETH, COMPLICATED BY DEFECTS IN THE DENTITION

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Abstract

The article describes the treatment that was carried out in a complex manner, taking into account the general state of health, the age of the patient, the activity of the course of the pathological process by restoring the anatomical shape of the teeth and replacing defects in the dentition with orthopedic structures based on dental implants. Dental implantation in the area of dentition defects was performed in the presence of a sufficient amount of bone tissue and no indications for bone augmentation. During the first month after implant installation, a decrease in stability in the “bone-implant” connection was noted, then, in the second and third months after the operation, an increase in implant stability with the achievement of maximum performance in a year, which indicates remodeling of the bone tissue around the implant.

Keywords: pathological erasure of dental hard tissues, dental implantation.

The gradual loss of hard tissues of teeth throughout the entire period of existence of the human body is a natural process that is the result of the physiological function of chewing and non-chewing movements of the lower jaw. There are two types of abrasion of hard tissues of teeth - physiological and pathological. Physiological erasure is considered as a process that prevents functional overload of periodontal tissues and provides physiological movements of the lower jaw in various phases of articulation. Physiological abrasion of hard tissues of the teeth proceeds gradually, and normally, before the age of 40, only the first visual signs of physiological abrasion appear in the form of loss of enamel within the dentin.

Pathological abrasion is designated as a rapidly progressive pathological process, accompanied by a pronounced loss of enamel and dentin, aesthetic, phonetic and functional disorders of the dentoalveolar system. According to the indications of the loss of hard tissues of the teeth, three degrees of pathological abrasion are distinguished: I degree - erasure of hard tissues within the enamel, partly dentin; II degree - erasure of hard tissues of the teeth within the main dentin (without translucence of the tooth cavity); III degree - erasure of enamel and dentin within the replacement dentin (with translucence of the tooth cavity) and IV degree - erasure of the entire crown of the tooth. According to the prevalence of the pathological process - limited and generalized

clinical forms of pathological abrasion [1]. among which dental implantation has become increasingly popular in practical dentistry over the past 20 years. To date, the state of dental implantation is characterized by high efficiency and a significant range of possibilities. According to the literature, due to the successful development of structures, the improvement of the technology of manufacturing materials and methods of surface treatment, the level of successful osseointegration of installed dental implants reaches 90–98% [2, 3]. At the same time, issues of prevention of complications of dental implantation are of great importance. associated with functional overload, characteristic of pathological abrasion and bruxism, which leads to a reduction in both their service life and the period of use of orthopedic structures based on dental implants, which determines the relevance of the study.

Materials and methods of research

A clinical and laboratory examination was carried out in 72 patients with generalized pathological abrasion of hard dental tissues aged 35 to 65 years, 39 women and 33 men. , determination of the size and topography of defects in the dentition, the state of hard tissues of the teeth, the height of the clinical crown of the teeth, the state of periodontal tissues and alveolar processes, the type of bite and occlusal relationships, the state and position of teeth that have lost antagonists, the presence of dentures in the oral cavity, the duration

of use them and the presence of complications. Among the special research methods, the analysis of diagnostic models, radiography (orthopantomography and computer tomography) were used. Electrorodontodiagnostics was carried out using the EndoEst-3D apparatus. The quality of the bone tissue of all examined patients in the implantation area was assessed by the percentage ratio of the cortical and cancellous substance of the jaws according to classification C. Mich and K. Judi (2010). Prediction of the course of dental implantation was based on the determination of radiological bone density by densitometric indicators of gray values on the Hounsfield units (HU) scale. To assess the stability of implants, the resonance frequency analysis method was used using the Osstell ISQ device.

Results of the study and their discussion During the clinical examination of this group of patients, attention was drawn to aesthetic disorders - shortening of the lower part of the face, the severity of the nasolabial and chin folds, which does not correspond to the age of the examined, the density of the closing of the lips, the lowering of the corners of the mouth with frequent manifestations of angular. An intense loss of hard tissues was observed in all teeth or their separate groups. The increase in the frequency of pathological abrasion of teeth, the "rejuvenation" of this pathology, in our opinion, is largely associated with environmental factors, an increase in the number of patients with endocrine pathology, in particular, thyroid dysfunction. Progressive loss of enamel and dentin of teeth in 38 people of bite height, aesthetic disorders, functional complications and in nine people - dysfunction of the temporomandibular joints.

Patients with pathological abrasion of hard tissues of the teeth complained of discomfort in the area of masticatory muscles, pain in the area of the temporomandibular joints, as well as in the initial forms of pathological abrasion in case of exposure of the enamel-dentinal border - the phenomenon of hyperesthesia. depending on the severity of the pathological process: stertigation tubercles; along the cutting edges of the teeth of the frontal group - facets, recesses of various shapes, surrounded by sharp protruding edges of the enamel. At II and III degrees of abrasion, dense smooth brown dentin was observed on the wear facets, often with translucence of the pulp chamber. On the teeth of the frontal area, a combination of horizontal and vertical forms of pathological abrasion was often observed. On examination, there was a loss of natural color and optical properties of the teeth associated with the loss of enamel. The progressive loss of hard tissues of the teeth was often combined with other forms of non-carious lesions, such as erosion, abfraction, etc. Treatment was carried out taking into account the causative factor, general health, age of the patient, activity of the course of the pathological process. and, if necessary, aesthetic restoration of the anatomical shape of the teeth. In patients with grade I pathological abrasion, the main objectives of therapeutic measures were to stabilize the process, prevent further progression of the loss of hard tissues, and eliminate aesthetic defects. to the prophylactic closure of wear facets with composite ma-

terials in order to prevent further erasure, the manufacture of such structures as inlay - replacement of crown defects in the fissure zone, onlay - replacement of crown defects in the case of partial absence of tubercles, etc. In patients with 2nd and 3rd stages, the height of the occlusion and the ratio of the jaws were restored with the restoration of the height of the occlusion by direct restoration of the anatomical shape of the teeth in turn of the lower and upper jaws under the control of the bite roll of antagonist pelvises using hybrid photopolymer materials, as well as artificial crowns. Considering the predicted presence of an increased occlusal load, due to the presence of bruxismal episodes of varying intensity in individuals with pathological abrasion and the presence of bruxismal episodes of varying intensity, dental implantation in the area of dentition defects was performed in the presence of a sufficient amount of bone tissue (12–15 mm) and from 12–15 mm. Patients received 28 endosseous dental implants. The installed implants were of the same company, made of Grade 4 pure titanium, conical structure with a rounded top, and also had a microstructured shoulder with a light platform. The implant surface was processed according to the SLA technique. As a rule, during the first month after the implant is placed, there is a decrease in stability in the bone-implant connection. Then, an increase in the stability of the implant begins in the second and third months after the operation, reaching an indicator of 64.51 ± 0.89 after 6 months, a statistically significant ($p < 0.05$) increase in the studied indicator to 68.41 ± 1.72 units after 12 months, which confirms the presence of bone tissue remodeling around the implant. The results of the resonance frequency assessment of the stability of dental implants are presented in Table. After a six-month period of osseointegration, patients were offered and performed prosthetics according to the following protocol: an abutment was installed with a crown outside the occlusion, then a temporary crown was made for one month, which perceived the occlusal load, and at the final stage a permanent metal-ceramic crown was fixed with occlusal ratios adjusted to grinding of contacts in the "tooth" area. The results of the study are consistent with the literature data [4, 5]. Prevention of the destruction of the fabricated orthopedic structures was carried out by manufacturing protective elastic caps, which patients were required to use during the adaptation period in the first 45 days after fixing the structure in the oral cavity at night. Pathological abrasion of hard tissues of the teeth is accompanied by a number of morphological and functional changes in the dentition, which depend on the degree of pathological abrasion and are aggravated in the presence of partial loss of teeth.

Conclusions

1 Pathological abrasion of hard dental tissues is accompanied by a number of morpho-functional changes in the dentition, which depend on the degree of pathological abrasion and are aggravated in the presence of partial loss of teeth.

2 The choice of treatment method should be chosen depending on the clinical form, the severity of the pathology and the presence of concomitant complica-

tions. Gradual loading of the dental implant under conditions of increased occlusal load contributes to the prevention of its overload at the adaptation and rehabilitation stage and to the prolongation of the service life of the orthopedic structure as a whole.

3. Clinical observation of treated patients for three years indicates the clinical effectiveness of the proposed means and methods of treatment and the feasibility of their use in medical practice.

References:

1. Bida V.I., Struk V.I., Zabuga Yu.I. Patologichne stirannya zubiv i iogo likuvannya. –Chernivtsi: Bukrek, 2015. – 72s.

2. Fastovets' O.O. Kliniko-patogenetichne obruntuvannya kompleksnogo likuvannya-patologichnogo stirannya zubiv: avtoref. dis. ... d-ra

med. nauk: spets. 14.01.22 / O.O. Fasto-vets'. – K., 2008. – 35 s.

3. Mish K. E. Ortopedicheskoe lechenie s oporoi na dental'nye implantaty /Karl E. Mish; per. s angl. – M.:Rid Elsiver, 2010. – 616 s.: il.

4. Bida O.V. Osoblivosti ortopedichnogo likuvannya khvorikh iz chastkovoyu vtratoyuzubiv iz zastosuvannyam dental'noi implantatsii zalezchno vid pokaznikiv shchil'nosti kistkovoitkanini shchelepi // Ukraïns'kii stomatologichnii al'manakh. – 2016. – No 1 (tom 2). –S. 60–63.

5. Tkachenko I.M. Viktoristannya znimnoi shini-kapi dlya ortopedichnogo likuvannyapidvishchenoi stertosti zubiv, uskladnenoi yavishchami bruksizmu / I.M. Tkachenko // Bukovins'-kii medichnii visnik. – 2013. – T. 17, No 1 (65). – S. 129–133.

CLINICAL INDICATORS OF PROSTHETICS WITH ALL-CERAMIC PROSTHESES ON DENTAL IMPLANTS WITH SCREW AND CEMENT FIXATION

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Abstract

Orthopedic treatment of dental patients with dentition defects is one of the main tasks of dentistry, which improves the quality of life and prevents the development of complications of this pathology of local tissues and the body as a whole. Along with traditional methods of prosthetics (fixed bridge structures, partial and full dentures), designs based on dental implants are becoming increasingly popular. It due to a number of advantages of these prostheses, especially in conditions of distally unlimited defects in the dentition.

Keywords: dental implantation, fixed orthopedic constructions, ceramic restorations.

The accuracy of the connection of the implant with the abutment and the suprastructure as a whole is a fundamental factor in the stability of the future prosthetic construction. To ensure a reliable and high-quality connection between them, as well as the positional stability of the contacting elements, a guaranteed minimum gap between them with a strictly limited value is required [1]. One of the most important factors that ensure the reliability and duration of prosthetics on implants, in addition to surgical aspects, is the accuracy of fabricated structures and the mechanical integrity of all elements of the implant system [1]. The development of technologies for the manufacture of modern structures makes it possible to achieve a high accuracy of fit of the elements of the superstructure with a guaranteed minimum gap not exceeding 2–5 µm. In the absence of accuracy in the manufacture of the prosthesis and the presence of an uneven gap between the abutment and the inner surface of the orthopedic structure, conditions are created for the destabilization of the system with the appearance of areas of increased stress, which in turn results in de-cementing or weakening or destruction of the abutment fixing screw [1, 4]. Prosthesis are observed in the connection zone between the parts of the skeleton prosthesis, which, under cyclic loading, can lead to the destruction of the prosthesis frame in this area [2, 3]. According to other authors, in all-ceramic

restorations supported by dental implants, compressive and tensile stresses accumulate in the framework in areas that have an increased load, such as the cervical margin of the structure, where high torque and stress concentration arise as a result of the weighting effect [5]. These data are also confirmed by the results of electron microscopy of samples of all-ceramic structures after a cyclic load applied to them: rough areas, cracks, fractures, and chips are noted [6]. The study of the influence of the type of connection of structural elements on orthopedic structures, intraosseous dental implants, on the quality of orthopedic rehabilitation of patients and the duration of use of dentures is an important aspect of modern dentistry. However, today there is no consensus on this issue. The scientific literature provides convincing evidence for the benefits of both cemented and screw connections. Both types of constructs (cement-retained or screw-retained) affected the clinical outcome in different ways. None of the types of fixation had advantages. Cement-retained dentures showed more serious biological complications (implant loss, more than 2 mm bone loss), screw-retained designs had more technical problems. Screw-retained suprastructure undergoes easier removal than cemented, and therefore technical, respectively, biological complications are easier to treat. For these reasons, and due to the apparently higher biocompatibility, it is