

DENTAL IMPLANTS CAN GENERATE MAXILLARY POSTIMPLANTATION SYNDROME

SINDROMUL POST-IMPLANTAR MAXILAR: CONSECINȚĂ A IMPLANTAȚIEI DENTARE

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Summary

The researcher determined a problem of the distant maxillary postimplantation syndrome. The peculiarity of the syndrome is constituted by 3 groups of symptoms: neurological, rinological, ophthalmic.

Key words: dental implantation, maxillary postimplantation syndrome

Rezumat

Autorul argumentează existența problemei unui sindrom postimplantar maxilar. Particularitățile acestuia cuprind trei grupe de simptome: neurologic, rinologic, oftalmic.

Cuvinte cheie: implant dentar, sindrom postimplantar maxilar

Any pharmaco-surgical intervention (including dental implants) - a violation of the integrity of the structure and function of tissues, organs, body systems on the background to some extent severe pathological endogenous conditions and afferentiation, which leads to a reduction of some risks, and upon completion of the intervention - an increase in other...

Dental implantation (DI) - generally acceptable technology orthopedic functional and aesthetic rehabilitation of patients with partial dentition defects and the complete absence of teeth.

Examination of volumes and types of DI found that the frequency of implantation in various clinical situations in 1996-2005 has not changed significantly, the average age of the patients corresponded efficiency; all patients had clinically significant concomitant somatic pathology. Known absolute and relative contraindications for DI: hypertension, type 1 diabetes, tuberculosis, rheumatic disease, diseases of the blood and blood-forming organs, diseases of the skeletal system (reducing its regenerative capabilities), diseases of the central and peripheral nervous system, malignant tumors during treatment, diseases of the oral mucosa [7]. Risk of unsuccessful DI due to the following reasons: osteoporosis, causing violations of biomechanical relationships jaw - implant - prosthetic design implant -jaw, lack of general and local immune defenses, disturbance of microcirculation in the tissues of the mouth. DI, there are three dangers. [13]

Dangerous anatomy. Form, structure, pneumatization of the maxillary sinus and the structure of the alveolar bone of the upper jaw are in close anatomical dependence. Close anatomical relationship topographical lacrimal and rhinology systems remains an indisputable fact [4,5,9]. The mucous membrane of the lower divisions of the nasolacrimal duct, which is a continuation of the nasal mucosa, it is absolutely identical in their morphological structure, which can not predispose to direct the spread of pathological processes of the nasal cavity to the lacrimal pathway [9,13]. The main condition for the use

of intraosseous implants - is a sufficient amount of bone with good quality, it provides stabilization and allows the implant to support non-removable prosthesis design. Even a slight absence of bone in the horizontal or vertical direction can create a significant problem [5,9,11]. In assessing classification S. Misch (1990) quality of alveolar bone most common type D3 - 45% of cases, type D2 - the most favorable for DI, met only in 18.5% of cases [4].

Taking into account topographic anatomical relationship with neighboring maxillary bone structures should be allocated following the pockets of the maxillary sinuses: alveolar, palatal, zygomatic, infraorbital or lacrimal front (prelacrimality), wedge or sphenoid, palatine bone. Infraorbital sinuses or prelacrimality pocket extends to the frontal process of the maxilla. It is bounded behind lacrimonasal duct, and outside - the infraorbital canal. In 12.8 % of cases lacrimonasal channel can go deep in the pocket and prelacrimality is surrounded on three sides. Such contact may facilitate the transition from sinus inflammation on lacrimal sac, lacrimonasal channel and the front of the ethmoid bone cells. In this anatomical variant exists the possibility of damage during DI thin bony wall separating the infraorbital sinus pocket of the lacrimal sac and lacrimonasal channel [4, 9]. Chronic dacryocystitis in 80-85% of patients were found with various forms of nasal diseases [9, 11].

Innervation of the maxillary sinuses performed two branches of the trigeminal nerve and its other branches (infraorbital nerve, upper alveolar nerves, external nasal branches) [8]. You should remember about axoplasmatic anterograde and retrograde transport - moving substances from your body processes and processes in the body of the neuron. Transport is represented by two main components: a fast component (200-4000 mm per day) and slow (1-20 mm per day). Axoplasmatic transport is quite complex and vulnerable function of nerve cells, which are often the first to suffer when neuropathies [16].

Dangerous pathology. Despite the extensive use DI in the

upper jaw with a sinus-lift, there are 2 problems: pathology of the paranasal sinuses, which restricts the holding DI; development of sinusitis maxillary sinus after sinus lift, which occurs in 3 to 20% of patients [4, 5, 9, 11]. For example, maxillary sinus pathology was detected in 56.5% of patients [5]. On the basis of nasal endoscopy and computed tomography of the maxilla and ostiomeatal complex (OMC) 27 (23.5%) patients required surgical, 19 (16.5%) patients - conservative treatment before sinus lift.

Odontogenic maxillary sinusitis (result of odontogenic infection) is characterized by clinical features (toothache or dental intervention in history, one isolated lesion of the maxillary sinus, the characteristic putrid odor discharge) instrumental and radiological methods of research (localization of pathological changes in the alveolar sinus bay, minor inflammatory changes in the nasal cavity, nasal breathing is satisfactory, open form of sinusitis, presence antro-oral anastomosis or defect of the reflex sinus bone plate) [4,5].

Valsalva retinopathy was first described in 1972 by Thomas Duane as a «special form of retinopathy, preretinal and hemorrhagic in nature, secondary to a sharp increase in intrathoracic pressure» as a result of stress (Valsalva maneuver). [15] It Valsalva maneuver caused hemorrhage of retina and vitreous in apparently healthy subjects and patients with blood diseases, diabetes, hypertension, venous occlusion eyes during dental implantation[17].

In all patients with nasal breathing difficulties lasting more than 1 year are shifts cerebrovascular autoregulation and acid-base balance, regardless of the etiology of the disease: the timing of nasal obstruction from 1 to 5 years - an increase in reactivity of cerebral vessels (unidirectional shift constrictor and dilatatory reactions) and compensated respiratory alkalosis (surgery normalizes clinical and laboratory parameters and cerebral hemodynamics in the first month after surgery); from 6 to 10 years - reduced reactivity of the cerebral vessels and compensated respiratory alkalosis (normalizes within 3 months after the operation, but there is still tension cerebrovascular autoregulation), more than 10 years - a gross violation of autoregulation of cerebral arteries (two vascular reactivity disparity pools brain) and compensated respiratory alkalosis compensated metabolic acidosis (treatment normalizes clinical and laboratory parameters after 6 months, but not cerebral hemodynamics - gross violations persist vascular autoregulation mechanisms that lead to the formation of cerebral pathology) [10].

Functional status among patients, formed under the influence of fear and emotional stress can lead to a variety of somatic complications, prolongs prosthetics and reducing the level of satisfaction with the treatment [12]

The fate of implants depends on somatic states: in the long term (after 6 - 8 years) loss of implants in patients with diabetes was 29.7%, and in patients suffering from hypertension - 11% in patients with pathology of the urinary system - 14.4% [7].

Important role to play biocenosis oral condition which is often associated with the presence of concomitant somatic disease in patients [3]. Even outside of inflammation in the oral cavity for a significant microbial colonization (degree of contamination often reaches a critical limit of 10⁵-10⁶), which is considered a natural, but can cause microbial adhesion and invasion. The normal oral flora dominated by Gram-positive cocci, wherein the ratio of aerobes and anaerobes 1000:1

[11]. The composition of biocenosis oral includes 700 species of microorganisms, which are interconnected in a dynamic equilibrium that emerged in the course of a long evolution and maintained by immune factors [2]. For the most clinical significance of aerobic microorganisms allocated streptococci and staphylococci, and among anaerobes - Bacteroides group.

Known effect of chronic rhino - and odontogenic infection on local immunity eyes in patients with absence of clinical symptoms and complaints from the organ of vision, but the presence in the body of the periorbital focal infections are deviations in leukocyte migration inhibition reaction with antigens of the eye tissue. This indicates subclinical violations of state authority and can not be regarded as a normal condition. [1]

Dangerous surgery. To install the implant need a certain thickness and height of the alveolar bone. Implant should surround the bone thickness not less than 1 mm. Maxillary sinus and piriform aperture, must be separated from the implant bone layer at least 1 mm [9,11].

Almost DI - a precision surgery. The success of dental implants depends on how accurately the surgeon will be able to install the implant in the bone. Regenerative potential of bone tissue directly adjacent to the infected bone defect, accompanied by tissue hypoxia, usually significantly reduced.

The ideal condition is a position of the implant at which it is surrounded by bone tissue on all sides, In this case bone properties are such that they maximally promote primary fixation of the implant. The ideal implant should have a maximum length and diameter. that would allow him to distribute the maximum mechanical load over a larger area. DI surgeon has to decide sometimes opposite problem.

So taking care of the maximum length of the implant comes into conflict with the anatomy of the maxillary sinus, the introduction of which must be avoided..

Described the sudden loss of the central field of vision in one eye in a patient with hypertension during dental implant on the background intravitreal, sub - and intraretinal hemorrhage [18], dental implantation induces pathology of the eye. After DI possible postoperative complications (gapping, painful syndrome, swelling, bleeding, fever, numbness and loss of sensation) and complications during healing of the implant (peri-implantitis, implant rejection) [4,5,11].

Derived in the maxillary sinus implants performed operation traumatic sinus floor elevation combined with chronic sinusitis, deformation and OMC dysfunction natural anastomosis promotes the development of sinusitis in the postoperative period [5]. Results of the study [14] indicate that after DI in brain structures occur multidirectional compensatory and destructive changes of neurons and blood vessels.

According to [11] must fulfill the implant patient to have clinical stability and function for at least 8 years, without inducing the negative symptoms and without damaging the adjacent anatomical structure. Around the implant should be no progressive bone resorption, and vertical bone volume to be lost is minimal. Deviation from these criteria for successful implantation of a 5-year period after the operation can be considered complications.

Clinical examination of 94 patients after 6 months or more after DI (made against the background of the lack of absolute and relative contraindications, clinically designed neurological, rinological, ophthalmic diagnoses) identified 100% of patients

with pathology of the conjugate after implantation, which we define as the maxillary postimplantation syndrome. Syndrome develops at a mean of 6-12 months after DI and has varying degrees of severity of degenerative process from subjectively imperceptible when compensated forms to bright with exacerbation of clinical manifestations. Maxillary postimplantation syndrome occurs in almost all patients after dental implantation regardless of the number of implant units,

always runs a chronic and occurs in three forms: compensated, and sub compensated, decompensated.

Feature flow decompensated forms maxillary postimplantation syndrome is the presence of 3 groups of symptoms identified over the last three years: neurological (various facial prosopalgia and sympathalgia) rinological (presence of nasal obstruction, rhinorrhea), ophthalmic (noninfectious lacrimation, dacryocystitis, conjunctivitis) [9].

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