



The benefits of dental treatment under general anesthesia can only be discussed in the context in which it is carried out under conditions of maximum safety for children patients. We should keep in mind that the intervention must be carried out in the hospital, equipped with all the necessary equipment in operating rooms, which is able to manage this kind of treatment in all phases of anesthesia.

Therefore, the dental treatment of children under general anesthesia in the dental room / dental clinic is completely inappropriate, this kind of intervention can only be performed safely in all respects in a hospital. It is where the dental treatment under general anesthesia is conducted and supervised by a team of anesthesiologists who specialize in treating children, and, if necessary, there are pediatrician of related sciences, who, together with dentists, provide the prerequisites and conditions for dental treatment in order to obtain good results which are unattainable with traditional methods of treatment.

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PATHOGENETIC ASPECTS OF THE FORMATION OF CHRONIC CATARRHAL GINGIVITIS IN CHILDREN UNDER CHRONIC NITRATE LOADING

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The multicentric character of diseases of the periodontium calls for a necessity of studying the mechanisms of the formation of inflammation in the children's periodontal complex, taking into account the effect of certain endo- and exogenous factors and that will enable to approach differentially to an elaboration of diagnostic and medico-prophylactic programs.

In order to establish the mechanisms of a lesion of the periodontal tissues in children, living on a nitrate contaminated territory, a multicentric correlation analysis of the principal symptoms of gingivitis was carried out – an inflammation, gingival hemorrhage, dental tartar, the state of the oral hygiene and the indices of the prooxidant-antioxidant system in 30 children aged 12, 10 of them having a slight degree of severity of chronic catarrhal gingivitis (CCG), 10 children – a medium degree of severity and 10 children belonged to a group of arbitrarily healthy subjects.

As a result of a multicentric correlation analysis, three basic factors were revealed, their determination made it possible to identify the effect of each of the indices on the development of pathology.

Thus, factors I ($r=0.758$) reflects the nature of the state of the prooxidant-antioxidant system of the children's oral fluid, the latter being indicated by a high level of correlation dependences with almost all paraclinical parameters. It includes an elevation of the level of a nitrite-ion ($r=0.89$), diene conjugates ($r=0.82$), the level of the total protein ($r=0.82$), with a decrease of the activity of catalase ($r=0.88$), superoxide dismutase ($r=-0.79$), glutathione reductase ($r=-0.85$), glutathione transferase ($r=-0.84$) and a reduction of the level of HS-groups ($r=-0.87$) and the level of reduced glutathione ($r=-0.95$). This factor incorporated the degree of the marked character of such symptoms of CCG as an inflammation ($r=0.74$) and gingival hemorrhage ($r=0.74$), which corroborates a significant role of the above-mentioned biochemical indices in the formation of these particular signs of gingivitis. Factors II ($r=0.502$) – characterizes the influence of generally accepted factors in the development of gingivitis: the condition of the oral hygiene ($r=0.72$), dental tartar ($r=0.88$), the result of their actions being an inflammation ($r=0.55$) and gingival hemorrhage ($r=0.51$) in case of an increased level of malonic dialdehyde ($r=0.71$) as an end product of lipid peroxidation that is also indicative of an activation of the prooxidant mechanisms of alteration in the pathogenesis of the diseases. Factor III ($r=0.2$) – included the activity of glutathione peroxidase ($r=0.93$) which had a tendency towards an elevation with due regard for activation of the stress-limiting action of the glutathione system. The low level of the factor as to the general contribution to the mechanisms of the development of gingivitis is maybe explained, to a certain extent, by nonspecificity of the said system.



Thus, the absolute values of the coefficients of the factors of a mathematical model indicate that factor I is of greatest significance in the formation of CCG in children under the conditions of nitrate loading, i.e. systemic dysmetabolic changes that contribute to the development of inflammation and gingival hemorrhage.

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**RECONSTRUCTION OF ATROPHIC ALVEOLAR RIDGE AND DENTAL
IMPLANTATION IN THE DISTAL PART OF THE UPPER JAW**

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Modern pre-implantation preparation techniques and implant placement technologies have almost solved the problem of deficiency of optimal biological conditions, however, most of them are still expensive, long-lasting and difficult to use for both patients and most physicians.

Purpose: to improve the method of dental implantation in the distal part of the upper jaw with present bone deficiency in the subantral area. Objective: placement of the combined form implant with additional fixation in the medial cortex of the maxillary sinus.

The technology of alveolar ridge reconstruction and the simultaneous implantation in subantral section of the upper jaw with vertical bone supply exceeding 5 mm provide successful implantation treatment in this area, quick rehabilitation and no significant differences in the characteristics of treatment compared with implantation without reconstruction of the alveolar ridge. The amount of bone tissue in the subantral area up to 5 mm is considered critical for the primary fixation of the dental implant in implant dental prosthetics. Under these clinical conditions, bone augmentation is being done first in the distal aspect of the upper jaw and then, after 6-9 months, a dental implant is placed in an optimized bone volume. In order to shorten the timing of implantation treatment with subantral osteopenia of more than 5 mm and to build tissue in the distal upper jaw and install a dental implant in one operation, autologous cortical bone grafts and special fixators are used for primary implant fixation.

The use of bone autologous grafts for the fixation of implants in the subantral placement for the purpose of reducing the timing of implantological treatment is not widespread in dental practice, since it requires additional trauma associated with autologous bone grafting, high practical training of the surgeon and special conditions for surgery. Experience with the use of additional special implant retainers for subantral placement has not confirmed an increased prognosis for implant integration under bone osteopenia.

In 53 clinical cases of reconstruction and dental implantation in the distal aspect of the upper jaw with subantral bone height less than 5 mm, we used an original surgical technique of implant placement of a combined form with additional fixation in the medial cortex of the maxillary sinus. Of the 58 dental implants installed in this procedure, 55 (94.8%) remain functional 12 months after surgery.

The method of dental implantation increased effectiveness of dental implant prosthetics in the distal aspect of the upper jaw in subantral area by providing primary stability of dental implants with bone height less than 4.5 mm. Its simplicity and availability of surgical technique reduce the number of operations and the total duration of dental treatment. The encouraging preliminary results of the advanced techniques promote further study of the clinical features of this technique.