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USING GENERAL ANESTHESIA IN SURGICAL DENTISTRY

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For many people, including children, visiting the dentist is a difficult task. Fortunately, the equipment now is completely different from that which there used to be, even in public clinics. The importance of the child's first visit to the dentist is clear to doctors as well - in some dental clinics children receive small gifts and diplomas for courage. Medical staff try to set up at least some positive relationship with the child, and if it fails - no one makes the little patients open their mouth.

If a medical intervention is necessary or the medical situation is complicated, then there is an extreme measure – the child's dental treatment under general anesthesia. These are, of course, special cases or when there are very serious diagnoses and the above mentioned anesthesia cannot be performed in an ordinary private dental room. Though some countries have a great experience in performing such procedures, it is a completely new project for our dentists. But it allows us to solve the problems of children's teeth in one visit with the duration of treatment no longer than 2-3 hours. But who are the candidates for dental treatment under general anesthesia?

First of all they are the children with special needs. Children who suffer from specific diseases (different types of syndromes, neurological disorders, autism, etc.) require special dental care, which, in most cases, can not be provided without general anesthesia, classic intervention in the dental room can damage the health of the child or may be impossible without the cooperation with the patient.

The patients are very small kids who need large amount of dental treatment. The onset of dental diseases can occur in early childhood the child then requires complex intervention, rehabilitation of a large number of teeth from the age of 2-3 years. At this age, children tend to have very low degree of contact or cooperation with the doctor, and therefore there is a high risk of being injured during the classical dental surgery. In this situation, after a full dental assessment (clinical and radiological) of the patient, the practitioner may recommend dental treatment under general anesthesia, surgery, which includes resolution of all dental problems of the child in one visit (treatment), the length of which does not exceed 3 hours.

At the end of dental treatment under general anesthesia the patient is fully rehabilitated, but in terms of dental results - they are absolutely wonderful. This procedure includes a number of classic treatments performed in the dental room, and the child's stress is minimized.

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.

Halahdina A.A.

**PHYSICAL REHABILITATION IN A TREATMENT OF INFLAMMATORY PROCESSES
OF THE MAXILLOFACIAL AREA**

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In spite of considerable success in diagnostics and treatment of inflammatory diseases of the maxillofacial area (MFA), till nowadays they have not lost their scientific-practical value. Still they



are one of the most urgent issues of modern dentistry. Considering all the importance of the situation, the treatment of inflammatory diseases of the maxillofacial area should be comprehensive. Physical rehabilitation plays a considerable role in a comprehensive treatment of maxillofacial diseases.

Objective: to learn the efficacy of physical rehabilitation in a comprehensive treatment of inflammatory processes of the maxillofacial area during the early postoperative period. In order to provide the outflow an inflammatory exudate physical rehabilitation is carried out in the form of therapeutic exercises. Intensity and period of exercises are determined depending on the functional state of the patients' bodies. Special exercises for mimic and masticatory muscles are indicated in association with head movements repeated 5-6 times during 10-20 minutes. Slow developing exercises for the muscles of the upper and lower limbs, back and anterior abdominal wall in the beginning lying and sitting positions in combination with long-phase expiration respiratory exercises are indicated.

The results of the study showed that physical exercises provide improvement of the blood and lymph circulation in the injured place; activate reparative processes; accelerate resolution of an inflammatory exudate and improve its outflow from the wound; restore the functions of the mimic, masticatory and lingual muscles; prevent rough scar changes on the skin and mucous membrane. Physical rehabilitation prevents destructive-atrophic processes in the peri-articular tissues and thus prevents contracture and ankylosis in the temporal-mandibular joint, respiratory and thromboembolism complications, normalizes emotional state, possibilities at home and at work.

Thus, the methods of physical rehabilitation used in a comprehensive treatment of inflammatory processes of the maxillofacial area during the early postoperative period produce a positive effect on resolution of an inflammatory exudate, prevent development of marked scars, increase general nonspecific response of the body and provide restoration of the functions lost.

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THIRD MOLARS AS A SOURCE OF MESENCHYMAL STEM CELLS AND THEIR REGENERATIVE POTENTIAL

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Tissue engineering is one of the main directions of modern research not only in general medicine but also in dentistry. It is an alternative method of restorative treatment that is developing rapidly nowadays. Dental mesenchymal stem cells (MSCs) are easily available and can be expanded in vitro with relative genomic stability over a long period of time. Easy availability, multi-line differentiation potential, and immunomodulatory effects make dental MSCs different from other MSCs and an effective tool in stem cell therapy.

The aim of our research is to carry out a literature review concerning the possibilities of using MSCs obtained from third molars. Methods of our research are bibliosemantic, content analysis by using search databases (Medline, Scopus, Web of Science, Embase). Stem cell populations can be isolated from different tissues of the oral and maxillofacial regions. The extracted third molars are the most common source for dental pulp stem cells (DPSCs) which are present at different ages. DPSCs have high proliferating activity and are mostly used in tissue engineering. DPSCs are multipotent stem cells that could differentiate into various cell types, such as osteocytes, chondrocytes, adipocytes, cementoblasts, odontoblasts, endothelial cells, neuronal cells, melanocytes, myoblasts, and hepatocytes.

DPSCs can be used for vital pulp capping, after pulpotomy or even after pulpectomy with the subsequent vital pulp regeneration and stimulation of tertiary dentine formation (G. Meza, 2019). DPSCs may show the regeneration of dentinal tissue with the same thickness, porosity, and density, improve gingival status, and enhance both bone and cementum regeneration (B. Hernández-Monjaraz, 2018). They can be successfully applied for the temporomandibular joint (TMJ) arthritis treatment in rats (Cui et al), promote taste bud regeneration (Y. Zhang, 2019), the craniofacial bone defect repairing (R. T. Stuepp, 2020), systemic lupus erythematosus (SLE)