

MODERN ASPECTS OF MORPHO-FUNCTIONAL DATA AND TREATMENT OF AGE-RELATED CHANGES IN THE MAXILLOFACIAL REGION

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Abstract:

Everyone knows that teeth are naturally or rapidly eroded in the process of vital activity. This affects the lower third of the face, and the appearance changes automatically. Today, with the help of a special dental protocol called neuromuscular, it is possible to recreate the former appearance of the patient. Thus, the effect of rejuvenation is achieved while maintaining the function of the teeth.

Keywords: *oral cavity, teeth, lips, jaws, bite.*

Introduction

If we talk about a strict definition, neuromuscular or anti-age dentistry is a therapy aimed at recreating the functions of the maxillofacial region, facial structure, facial oval, rejuvenation and restoration of lost strength in the area of masticatory muscles, temporomandibular inserts and other elements. All elements of the oral cavity are simultaneously involved in the treatment process: teeth, lips, jaws, bite.

Thanks to the unique training in the field of maxillofacial surgery, supported by medical and dental science, orthopedic surgeons have expanded their specializations, and many of them are now engaged in craniofacial surgery and aesthetic facial surgery. Orthopedic dentistry itself is an integral field that covers aspects of science, clinical methods and aesthetics and is constantly being updated.

Over the past two decades, the field of oral and maxillofacial surgery (OMS) has grown significantly, and every breakthrough in the history of our field has occurred thanks to an ingenious step to invent a new technique, as well as thanks to many practitioners who later learned about this technique, saw its significance, then popularized and improved it [2].

Thanks to the rapid development of science and technology, reconstructive surgery of the oral cavity and maxillofacial region keeps pace with the times, ensuring a prosperous future. OMS reconstructive surgery focused on the main achievements achieved in the following aspects: revascularized tissue transplantation, bone grafts, platelet-rich plasma, tissue engineering, distraction osteogenesis, microsurgery, joint replacement, dynamic recovery, laser surgery, computer design.

Microvascular tissue transfer was one of the most important stages of reconstruction of the lower and upper jaws after surgery to remove the tumor. Modern methods using a vascularized composite fibular flap in combination with dental implants have led to successful rehabilitation in terms of speech, chewing and facial aesthetics [3-5].

The search for ideal bone graft substitutes is an urgent problem of maxillofacial surgery and oral implantology. The material for bone grafting should provide a framework for bone regeneration (osteoconduction) and, at the same time, should promote the attraction of bone-forming cells and induce the formation of new bone (osteinduction) [7].

The use of autogenous bone tissue has been considered the gold standard in bone regeneration procedures for many years, but the soreness of the donor site, pain and prolonged hospitalization prompted the search for bone graft substitutes [8].

The study showed that favorable bone healing during guided regenerative surgery procedures using a demineralized dental graft is able to support autogenic growth factors (such as osteopontin, dentin sialoprotein and BMP) [9,10].

An innovative medical device (TT Tooth Transformer SRL, Milan, Italy) has recently been developed that uses a patient's tooth and is able to process a removed tooth in a short time and turn it into a bone graft material [11].

An autogenous demineralized dental graft contains BMP-2 (bone morphogenic proteins that stimulate bone growth) and guarantees absolute compatibility with the recipient site [12].

However, clinical and histological studies with a long follow-up period are necessary to better assess the potential of demineralized dentin autografts.

Materials and methods of research: Visiting an anti-age dentistry specialist does not depend on age. However, the sooner you contact him, the better and easier the treatment will be. The reason for contacting a neuromuscular dentistry doctor is any pain in the face, chewing muscles, teeth and their hypersensitivity.

But there are nuances here. If the patient is less than 25 years old, he has a complete dentition, but he is dissatisfied with the appearance (teeth are wrong, the curvature of the teeth is not satisfied), then such a patient needs an orthodontist's consultation. If the patient is over 30-35 years old and has multiple restorations, chips, missing teeth, is not satisfied with the appearance of teeth or previously made restorations (crowns, veneers, frontal restorations on front teeth), it is better to consult an orthopedic dentist. If necessary, each specialist will refer his patient to another doctor for consultation.

But the changes associated with age and a decrease in the height of the lower third of the face are the formation of the so-called senile ("sad") appearance. There is a sinking of the corners of the lips, they seem to drop, an impression of a sad expression or a mask of pain is created. Age-related changes also include pronounced nasolabial folds, chin crease, most often a decrease in turgor on the face, which looks like a drooping cheeks, a displacement of the lower jaw to the back and the formation of a sinking facial appearance.

Moreover, today such changes begin even earlier in humans than in our ancestors. Very often, specialists are faced with such a concept as "increased washing of dentition", that is, excessive or premature erasure. This is a disease of civilization. This phenomenon is due to the fact that people have long changed their diet. The second reason is constant stress. In this condition, the muscles of the body are clamped, the teeth are overloaded and prematurely erased.

Results: Anti-age dentistry is always a multidisciplinary integrated approach of doctors of different specializations. Usually the team has an orthodontist, a periodontist therapist, a periodontist surgeon, an orthopedist, an implantologist. Also, important specialists such as an osteopath or a kinesiologist are often involved in treatment. ENT, neurologists, cardiologists and others work closely with these specialists. The treatment also uses a whole range of digital equipment, which allows you to make the treatment more objective, and not just focus on the opinion of the patient or the doctor.

To date, there are research complexes that help the doctor at the stage of diagnosis and allow to harmonize the comprehensive rehabilitation after treatment. An example is the BioPAK computer diagnostic complex. The following studies are performed on it:

- electromyography, that is, the quality of the chewing muscles is evaluated;
- electronic auscultation – reveals the features of the jaw joints;
- kinesiography – recording the movement of the lower jaw and spatial orientation of the bite in relation to the upper jaw at all stages of treatment;
- a method for determining the physiological bite, that is, the physiological point of closure of teeth;
- T-Scan is a scanning microscope that helps the doctor in the final stages of any prosthetics or orthodontic treatment. Working with it helps to harmonize the bite, that is, to achieve the perfect quality of closing the dentition. The chewing load is distributed evenly between the new teeth.

Conclusion

Neuromuscular dentistry allows you to save energy and adaptive forces of the body for many years – because they will not be spent on "paying off errors" in the face and neck. In addition, treatment according to the anti-age protocol improves the aesthetic perception of a person's face: it becomes symmetrical.

Neuromuscular treatment has no contraindications. The treatment plan and duration is an individual matter for each case. In order to start it on time and conduct it most effectively, we recommend that you visit the dentist regularly – at least once every six months and maintain the health of not only your teeth, but also your gums.

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