



ELECTRICAL STIMULATION USING THE BLINKING REFLEX SYSTEM IN THE COMPLEX TREATMENT OF PATIENTS WITH TRAUMATIC NEUROPATHY OF THE MANDIBULAR NERVE AFTER DENTAL IMPLANTATION

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Article history:	Abstract:
Received: November 8 th 2022 Accepted: December 10 th 2022 Published: January 14 th 2023	In this article, electrical stimulation using the blink reflex system in the complex treatment of patients with traumatic neuropathy of the mandibular nerve after dental implantation, electrical stimulation according to the blink reflex system, the peripheral connection of the trigeminal nerve, the reticular formation of the brain stem are described in detail.

Keywords: dental implant, mandibular nerve, traumatic neuropathy, blink reflex, reticular formation.

INTRODUCTION:

When performing dental implantation in the lower jaw, there is a certain risk of damage to the mandibular nerve for various reasons. This complication is manifested by the absence and a long-term change in the sensitivity of tissues in the area of innervation, the development of pain syndrome of varying intensity, and is also accompanied by emotional stress disorders and significantly worsens the quality of life of the patient, and therefore requires timely and optimal diagnosis and treatment. In case of damage to the lower alveolar nerve during dental implantation, it is possible to speak with certainty only about the interoperative tactics of the doctor with obvious perforation of the mandibular canal and symptomatic treatment.

LITERATURE ANALYSIS AND METHODOLOGY:

The problem of the developed complication has not been sufficiently studied, and the results of the studies conducted are ambiguous. Various methods of complex treatment of patients with neuropathy of the mandibular nerve are known: pharmacological, surgical, psychotherapy, reflexology, hyperbaric oxygen therapy, hirudotherapy, the use of stem cells, the method of prolonged conduction blockade of the third branch of the trigeminal nerve, physiotherapeutic methods.

Long-term studies have shown that under the influence of electrical stimulation through the system of the blinking reflex, it is possible to significantly activate regenerative and regenerative processes in traumatic and compression-ischemic neuropathies in

the nerve trunks and accelerate the restoration of the functions of the peripheral nervous system and the functional activity of the motor apparatus. In the rehabilitation of patients with trigeminal neuropathies, one should remember the need not only for the functional restoration of peripheral neuromuscular formations, but also for the interconnections in the central nervous system.

RESULTS:

The purpose of the study was to develop and scientifically substantiate the use of electrical stimulation according to the blinking reflex system to activate neurotrophic processes in the complex treatment of patients with traumatic neuropathy of the lower alveolar nerve after dental implantation.

All patients received standard medical treatment, which included taking non-steroidal anti-inflammatory drugs, as well as Cavinton, Nivalin and Milgamma according to standard regimens. Conducted 10 daily procedures with bipolar pulsed currents from the device "Miomodel-10". The patients were divided into 2 groups: the comparison group, in which they resorted to the impact of one pair of electrodes along the mandibular nerve, and the main group, in which the impact was carried out according to the blinking reflex method.

DISCUSSION:

The method of electrical stimulation according to the blinking reflex system with bipolar pulsed currents is as follows: self-adhesive electrodes are symmetrically applied on both sides in the area of skin projections of



the exit of the branches of the trigeminal nerve to the first branch, to the second branch, to the third branch, and also in the area of the gasser node.

According to modern studies, in the regulation of muscle tone, descending adrenergic supraspinal pathways, starting in the locus coeruleus, also play a certain role. Anatomically, these pathways are associated with spinal structures, especially the anterior horns of the spinal cord. Due to the peculiarities of the morphofunctional organization of the trigeminal nerve, when it is compressed on the periphery, the increased flow of afferent impulses from the muscle subsequently leads to the appearance of neuropathic pain with the inclusion of central sensitization, which contributes to the formation of an algogenic system of the paroxysmal type in the central structures.

CONCLUSION:

In conclusion, the fibers of the third neurons pass through the internal capsule and end in the lower part of the posterior central gyrus of the cerebral cortex. The implementation of reflexes from the trigeminal nerve involves interneuronal ensembles of the reticular formation of the brain stem with the involvement of structures of nociceptive control at the level of the periaqueductal gray matter and raphe nuclei. Therefore, electrical stimulation according to the system of the blinking reflex is carried out by bipolar pulsed currents.

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