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ISSUE
№40

EUROPEAN OPEN
SCIENCE SPACE

COLLECTION OF SCIENTIFIC PAPERS

1ST INTERNATIONAL
SCIENTIFIC
AND PRACTICAL
CONFERENCE

THE FUTURE OF SCIENCE: EMERGING RESEARCH AND TECHNOLOGICAL INNOVATIONS

JUNE 16-18, 2025. HELSINKI, FINLAND

EUROPEAN OPEN SCIENCE SPACE

Proceedings of the 1st International Scientific and Practical Conference

"The Future of Science: Emerging Research and Technological Innovations"

June 16-18, 2025

Helsinki, Finland

Collection of Scientific Papers

Finland, 2025

UDC 01.1

Collection of Scientific Papers with the Proceedings of the 1st International Scientific and Practical Conference «The Future of Science: Emerging Research and Technological Innovations» (June 16-18, 2025. Helsinki, Finland). European Open Science Space, 2025. 333 p.

ISBN 979-8-89704-967-7 (series)
DOI 10.70286/EOSS-16.06.2025

The conference is included in the Academic Research Index ReserchBib International catalog of scientific conferences.

The conference is registered in the database of scientific and technical events of UkrISTEI to be held on the territory of Ukraine (Certificate №59 dated 6.01.2025).

The materials of the collection are presented in the author's edition and printed in the original language. The authors of the published materials bear full responsibility for the authenticity of the given facts, proper names, geographical names, quotations, economic and statistical data, industry terminology, and other information.

ISBN 979-8-89704-967-7 (series)

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INJURY TO THE AUTONOMIC NERVOUS SYSTEM AND THE TEMPOROMANDIBULAR JOINT (*ARTICULATIO TEMPOROMANDIBULARIS*) IN BLAST TRAUMA

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Relevance. Injuries to the maxillofacial region during blast trauma affect not only hard tissues but also the delicately structured autonomic nervous system (*systema nervosum autonomicum*). Particularly vulnerable are the temporomandibular joint

(*articulatio temporomandibularis*) and the branches of the trigeminal nerve (*nervus trigeminus*) - the second (V2) and third (V3). Such damage complicates not only mastication but also speech, facial expression, and the patient's psychological condition, having long-term consequences. Timely and comprehensive rehabilitation is crucial for maintaining quality of life.

Aim of the study. To analyze the clinical and anatomical lesions of the TMJ and autonomic nervous system after blast trauma, and to outline the possibilities for restoring the functions of speech, mastication, emotional status, and social interaction.

Materials and methods. Descriptive fragments from a user-based clinical case analysis of blast injuries to the maxillofacial region were used. The study applied principles of structured clinical analysis, as well as logopedic, psychological, and neurosurgical interpretation. Terminology complies with Nomina Anatomica.

Results and conclusions. Following blast trauma, secondary complications are frequently observed, including muscle contracture, joint ankylosis (*ankylosis*), trigeminal neuralgia, chronic pain, disorders of mastication (*masticationis*), breathing (*respirationis*), deglutition (*deglutitionis*), and occupational disability. These conditions are accompanied by psychological isolation, depression, and social maladaptation [1].

The loss of function of the V2 and V3 branches of the trigeminal nerve (*nervus maxillaris* and *nervus mandibularis*) is specifically described. Their damage causes sensory disturbances in the cheek, lips, and chin, as well as dysfunction of masticatory muscles such as *m. masseter*, *m. temporalis*, and *m. pterygoideus*. In such cases, multidisciplinary care involving otolaryngologists, speech therapists, neurologists, and psychotherapists is required [2].

Malocclusion (*malocclusio*), numbness of the lower lip (*anaesthesia labii inferioris*), and reduced sensitivity upon palpation of the *tragus auriculae* indicate damage to the *n. auriculotemporalis* - a sensory branch of V3. Frequently, contracture of the *m. pterygoideus medialis* develops, blocking the opening of the mouth [2].

Inflammatory fibrosis leads to limited mouth opening. Compensatory activation of other facial muscles occurs, causing *asymmetria faciei*. Rehabilitation requires the restoration of the function of *m. orbicularis oris*, *m. buccinator*, as well as logopedic intervention to compensate for speech deficits [3].

In cases of reconstruction of the *rima oris*, *lingua*, or *palatum molle*, the inability to tightly close the lips leads to speech alterations: nasal resonance, distorted consonants, reduced voice volume and strength. This adds psychological burden to the patient [4].

The formation of TMJ ankylosis (fusion of bony or fibrous surfaces) results in a total loss of joint mobility, impairs articulation, and causes chronic pain. In cases of complete rigidity in the articulatio temporomandibularis, recovery prognosis is extremely poor [5].

Speech therapy aims not only to restore verbal communication but also to return the patient to social engagement, improve self-esteem, and prevent psychological

trauma. Without this, even after surgical treatment, the patient remains in a state of chronic social maladaptation [4].

Damage to the autonomic nervous system and TMJ during blast trauma is a complex, multifactorial process affecting somatic, speech, and emotional functions. Recovery requires not only stabilization of the joint or neural conduction but also a comprehensive speech and psychological rehabilitation strategy. This is the only path to returning the affected individual to an active life.

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ОКРЕМІ ДАНІ ЛІТЕРАТУРИ ЩОДО ЛАПАРОСКОПІЧНИХ МЕТОДІВ ГЕРНІОПЛАСТИКИ ПРИ ПАХВИННИХ ГРИЖАХ В ЗАЛЕЖНОСТІ ВІД СТАТІ

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Вступ Грижі передньо-бокової стінки живота та їх лікування залишається актуальною проблемою в хірургії. У світі щорічно виконується понад 20 мільйонів операцій [1]. Пахвинна грижа є однією з найбільш поширених, серед інших гриж передньо-бокової стінки живота. Частіше, пахвинну грижу виявляють у чоловіків, що пов’язано з клініко-анатомічними особливостями їх