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Research Article

CLINICAL AND DIAGNOSTIC FEATURES OF COMBINED FACIAL INJURIES

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ABSTRACT

One of the features of recent years is an intensive growth of traumatism among all categories of the population. Their causes are: technogenic catastrophes, natural disasters, road accidents, as well as military conflicts. In large cities, the large number of road accidents and industrial injuries is a major social and economic problem. It should be noted that among people under 40 years of age, traumatism ranks first as a cause of death. The result of epidemiologic analysis showed that combined trauma of the facial skeleton is noted in men. The complexity of injuries was associated with the combination of multiple fractures and the presence of rarely diagnosed craniocerebral injuries (CCI).

KEYWORDS

External skin, normal position, ablation, cranialization, obliteration, exenteration, nasalization.

INTRODUCTION

In severe combined trauma, the first minutes after the injury are crucial for the patient's life. At this point, the victim should be given the necessary care and start directed pathogenetic treatment. Therefore, the organization of the necessary care and examination of patients with combined trauma become a priority task on the way to solving the problem of improving the effectiveness of care for patients with combined injuries.

The tasks of maxillofacial surgeon in the treatment of fractures of the upper zone of the face are: repositioning of bone fragments in the normal position, sealing of the frontal sinus and cells of the

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lattice labyrinth from the dura mater and from the external skin, restoration of the contours of the upper zone of the face.

The existing options of surgical treatment of frontal bone fractures, including ablation, cranialization, obliteration, exenteration, nasalization, do not always give the desired cosmetic effect.

Taking into account the combined nature of trauma, the presence of various clinical symptoms, the nature and severity of traumatic injuries, this circumstance dictates further study of this issue with the development of differentiated approaches. This circumstance requires the formation of interdisciplinary, coordinated approach in the tactics of management of patients with combined trauma of maxillofacial region. All of the above has determined the relevance of the present study.

The aim of this study was to determine the course of this combined facial trauma.

MATERIALS AND METHODS OF RESEARCH

We studied 251 case histories of patients with combined injuries of the maxillofacial region. All patients were admitted as emergencies after trauma in the period from 2012 to 2014. Patients with combined trauma of the maxillofacial region accounted for 28.1% of the total number of hospitalized patients.

In the majority of cases (58.5%), combined trauma of the maxillofacial region was the result of highway and street accidents. The cause of injury in 18.4% was sports injury. Criminal injuries accounted for 17.5%. Other injuries accounted for 5.6% . The mean age of the subjects was 37.1±2.8 years. The obtained results were compared with the control group, which consisted of 25 healthy individuals, comparable in age and sex. The patients had craniocerebral trauma, trauma of the middle and lower zone of the face.

The results of the research and their discussion. Analysis of the results of subjective and objective clinical manifestations in patients with combined trauma of the middle facial zone (group 1) and lower facial zone (group 2).

Combined trauma is a trigger activator of psych emotional breakdown. Therefore, this circumstance led to changes in the emotional sphere of patients and neurophysiological data of the central nervous system, which served as a motivation for conducting this research method. At the same time, we paid special attention to revealing the level of adaptation of patients after trauma, which was determined by the degree of compensatory mechanisms in combined CRT.

The most frequent complaints in both groups were: severe pain at the site of injury, headache, nausea and vomiting, dizziness, tinnitus, darkening in the eyes,

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flickering "flies" in front of the eyes, photophobia, general weakness, rapid exhaustion, sleep disturbance, tearfulness, irritability. Somatic complaints were presented in the form of unpleasant sensations on the part of internal organs, fear or anxiety, palpitations, difficulty in breathing, dry mouth.

Neurological examination of patients in the acute period of combined CRT in different groups allowed to reveal insufficiency of innervation of cranial nerves. Cerebral symptomatology was represented mainly by oculomotor disorders and insufficiency of VII and XII pairs of cranial nerves of the central type.

Pyramidal symptoms in 67% of cases in Group 1 and 59% in Group 2 were manifested as increased tendon reflexes and anisoreflexia. Pathologic foot and hand signs (Babinski's symptom, Marinescu-Radovici s.) were detected in 13% of cases in group 1 and 25% in group 2. We noted dysfunction of the coordinator sphere, which was manifested mainly by instability in Romberg's p. p. and mild disorders of statics and coordination. Thus, in group 1 these manifestations were noted in 72% of patients, in group 2 - in 67%.

In most cases in the acute period of CRT, autonomic manifestations in the form of diffuse or distal hyperhidrosis, acrohypothermia, labile BP, palpitations, generalized fever, parasthesias in the extremities were noted. Thus, vegetative dysfunction in group 1 patients was detected in 79.6% of cases, in group 2 - in 83.5% of cases. The number of vegetative dysfunction signs per one patient averaged 2.9±0.4 units in group 1, 3.9±0.5 units in group 2, control group - 1.9±0.4 units. The average number of accompanying symptoms of vegetative dysfunction in patients of groups 1 and 2 was significantly ($p<0.05$) higher relative to the control group. It is important to note that when studying the state of the autonomic nervous system, the suprasegmental disorders revealed by us were characterized by polysystemicity and a high degree of severity of autonomic dysfunction. Analyzing the clinical picture of trauma, the neurological manifestations that we identified in 95% of group 1 and in 91.1% of group 2 were characteristic of neurotrauma.

In the course of the study, we noted clinical manifestations in the mental sphere with asthenia, anxiety, and mild depression in patients. This circumstance was the reason for a more detailed study and analysis of these manifestations. Taking into account these circumstances, we separately considered the psychopathological syndrome, which was characterized by neurotic, asthenic and neurosis-like conditions. These manifestations were observed in 76% of patients who underwent CRT. In our opinion, the formation of this syndrome is caused by multifactorial nature of the processes occurring in the nervous system during CRT, but the leading, in our opinion, is the presence of craniocerebral trauma and manifestation of stressful situation. It should be

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recognized that the presence of a stress factor in the acute period of CLLT often contributes to the smoothing of both subjective and objective neurological symptoms, which in many respects complicates the diagnosis of neurotrauma.

Any trauma of the maxillofacial region requires conservative complex treatment of possible brain disorders, where interdisciplinary participation of various specialists is assumed. It should be recognized that in many cases conservative therapy is quite difficult to categorize as purely neurosurgical or neurological care. In this regard, we proposed a complex of conservative treatment of brain disorders, including a number of therapeutic measures aimed, in addition to surgical treatment, at the correction of brain dysfunction and normalization of psychophysiological status. Conservative treatment included: cavinton (4 ml. IV drip on 200.0 saline solution, No. 10); mexidol (250 mg intravenously, No. 10); vitamin therapy (neurobion 3.0, intramuscularly, No. 10); NSAIDs: ibuprofen - 1 tablet 3 times a day, course - 14 days.

The results of clinical effect after the completion of the therapeutic program allowed to note a positive effect in both groups in 85% of patients. In 15% of cases there was an improvement of the condition in the form of reduction of cerebrosthenia symptoms and improvement of work capacity. The treatment revealed that in all cases patients with combined CRT showed improvement in the main psychophysiological parameters: well-being, mood, increased sleep activity.

Conclusions. The analysis of maxillofacial injuries for the period from 2020 to 2023 revealed an increasing trend in the structure of both all maxillofacial injuries and combined craniofacial injuries, where quantitative indicators of combined craniofacial injuries account for 19% of all maxillofacial injuries.

The average number of associated symptoms of autonomic dysfunction in patients with combined craniofacial trauma was significantly ($p<0.05$) higher relative to the control group. Psychopathological changes in combined craniofacial trauma are characterized by an increased level of personal anxiety, asthenia and manifestations of depression of various degrees.

Joint surgical and therapeutic treatment in the acute period of combined craniofacial trauma leads to a reliable ($p<0.01$) improvement of the patient's recovery results in terms of quality of life.

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