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CLINICAL ASPECTS OF THE COURSE OF PURULENT-INFLAMMATORY COMPLICATIONS IN FRACTURES OF THE MANDIBLE

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Abstract: According to the World Health Organization, in many countries of the world, including the Republic of Uzbekistan, there is a high prevalence of purulent-inflammatory complications of mandibular fractures and a low level of qualified surgical care. Currently, traumatic lesions of the facial skeleton account for 3% of the number of injuries to all bones of the human skeleton. The most common are fractures of the mandible, which account for up to 80% of the total number of injuries to the bones of the facial skeleton. A characteristic feature of fractures of the mandible within the dentition is a high probability of complications, primarily of an inflammatory nature.

Keywords: According to the data given in the literature, the frequency of their occurrence reaches 37.2-55.1%, while osteomyelitis is diagnosed in 16.8% of cases.

Introduction

Numerous scientific studies are being conducted on a global scale in order to study the etiology, prevention and complex pathogenetic therapy of purulent-inflammatory complications of mandibular fractures. In particular, research work has been carried out in scientific centers to create and improve various methods of complex treatment of purulent complications of mandibular fractures. The basic rules of the paradigm of mandibular fracture and purulent-inflammatory complications are associated with the practical application of scientific achievements. The conducted studies show a high prevalence of traumatic lesions of the facial skeleton and risk factors for its development in combination with an insufficient level of surgical care for patients with purulent-inflammatory complications of mandibular fractures, which requires the development of sound methods including preventive and complex pathogenetic therapy. Prevention and treatment of complications in patients with mandibular fracture and complications of purulent inflammation remain an urgent problem of medical practice.

In our country, targeted and practical measures are being implemented to reform the healthcare system and equate it with world requirements, measures are being taken to improve the diagnosis and restoration of fractures of the lower jaw. In this regard, such tasks as improving the efficiency, quality and popularity of medical care, as well as the formation of a system of medical standardization, the introduction of high-tech methods of diagnosis and treatment have been identified. This, in turn, determines the relevance of the topic of treatment of patients with a mandibular defect.

The purpose of the study: diagnosis of inflammatory complications of mandibular fracture and improvement of pathogenetic complex therapeutic measures [1.3.5.7.9.11.13.15.17.19.21.23].

Research objectives:

to determine the prevalence of mandibular fractures, complications of purulent inflammation, their localization and severity, taking into account clinical and laboratory indicators;

determination and evaluation of the clinical and microbiological state of the oral cavity of patients with mandibular fracture and the development of inflammatory complications in mandibular fracture;

determination of clinical and immunological parameters and comparative analysis of the state of bone metabolism in patients with a diagnosis of mandibular fracture;

to prove the influence of drugs based on probiotics, phages, antibiotics and proteolytic enzymes on the processes of bone tissue regeneration in the complex of treatment of these patients and to evaluate the effectiveness of treatment;

development of a set of measures and methods to increase the effectiveness of the use of ultrasonic aerosol treatment of the oral cavity for the prevention of inflammatory complications of fractures of the lower jaw;

A fracture of the mandible usually occurs as a result of the impact of a force that exceeds the physical capabilities of the bone tissue. Such a fracture is called traumatic. There are four mechanisms of fracture of the lower jaw: inflection, shift, compression, separation. The lower jaw has the shape of an arc. In the area of the corners, chin opening and canine, in the area of the base and neck of the condyle process, i.e. in the thinnest or curved places, the jaw experiences the greatest tension and breaks due to inflection. There are several possible variants of a fracture of the lower jaw due to an inflection. Patients are concerned about edema of soft parotid tissues, pain of the lower jaw, which increases when opening and closing the mouth, incorrect closing of teeth. Biting and chewing food is sharply painful or impossible. It is not uncommon to complain of numbness of the skin in the chin and lower lip, bleeding from the mouth. If there is a concussion of the brain, there may be dizziness, headache, nausea, vomiting.

In order to identify the assessment of the clinical course, this pathology was studied separately with grouping. Group I (comparison group) included 122 patients with fractures of the mandible, and group II (main group) included 109 patients hospitalized with fractures of the mandible and their various consequences, including purulent-inflammatory complications. And also, actually healthy people who have not been injured in the relevant area are included in this study. They were the third group of our research, their number was 35 people. In order to improve the effectiveness of treatment, it was planned to collect anamnestic data, taking into account or without taking into account concomitant diseases of patients who have received injuries in a particular area that prevent wound healing. In addition, clinical, microbiological and immunological studies were conducted aimed at eliminating the development of the suppurative process in the localization zone of the pathological focus [2.4.6.8.10.12.14.16.18.20.22.24].

Patients of both groups received emergency specialized medical care for fractures of the mandible and their complications in the BOMMC CHLH department. Among them were patients who differed in age, gender and the nature of the traumatic agent. Based on the complaints of patients and the data of the clinical and radiological picture of patients who were injured, Tigerstetd splints were installed to prevent displacement of the fragments of the lower jaw. As a result, a number of complications may occur, including post-traumatic osteomyelitis of the lower jaw.

The following indicators were used in almost all patients of the study groups: the presence and size of post-traumatic edema and infiltration of soft tissues located in the fracture gap zone, the daily dynamics of their changes and the intensity of pain. In addition, abscesses and phlegmons may develop in the future. During intraoral examination, there is swelling and infiltration of the mucous membrane and periosteum, the formation of abscesses with submucosal or subcostal localization. In the initial period of osteomyelitis, there are no radiological signs on the performed radiographs of the

lower jaw. The first radiological signs appear 14 days after the development of purulent-inflammatory phenomena in the bone, which is manifested by the expansion of the fracture gap with signs of osteoporosis, as well as the formation of different shapes and sizes of sequesters along the line of damage to the jaw. The decision to hospitalize patients with fractures of the lower jaw was made depending on the indications established by the duty doctor of the clinic's reception department and the doctors of polyclinics.

One of the etiological factors of the occurrence of complications of mandibular fractures of a purulent – inflammatory nature is a decrease in local immune protection and the level of hygienic condition of the oral cavity, an increase in the virulence of microorganisms, unsatisfactory fixation of splinting structures and, as a consequence, the mobility of bone fragments of the mandible. In addition, the causes of complications include a decrease in salivation and lysozyme production, the presence of a tooth or its root in the fracture gap, limited mobility of the mandible, followed by a violation of the trophism of the mandibular bone. A comprehensive study of mandibular fractures and their complications showed us the presence of a number of organic and functional changes, which is explained by compensatory adaptive processes. Therefore, it is necessary to pay attention not only to etiological factors, but also at the same time to pathoanatomic processes. This can additionally include specific and non-specific diseases of the musculoskeletal system.

Analyzing the data of the examination of the clinical status of patients with fractures of the mandible (LF) complicated by purulent-inflammatory diseases of CHLO, it was found that all the victims had local and general signs characterizing the development of the disease. Clinical manifestations, their severity and duration depended on the prescription of the injury and its severity, the presence of complications and concomitant injuries.

The analysis of the literature data and the results of our research indicate that the most common complaints of an inflammatory nature in purulent-inflammatory complications of fractures of the lower jaw include pain in the area of swelling, weakness, malaise, sleep and appetite disorders, increased body temperature. The general condition of patients with purulent-inflammatory complications of mandibular fractures in 58 (58.18%) was satisfactory, in 31 (31.64%) of moderate degree, in 9 (9.18%) severe. Body temperature ranged from 36.8 OC to 39.5 Oc. The clinical picture in patients was characterized by the presence of inflammatory infiltrate in the area of injury. The overall reaction of the body was expressed in proportion to the spread and nature of the local purulent process. Complaints of patients mainly consisted of general cerebral and local symptoms and amounted to: headache in 191 (82.6.0%), general weakness in 136 (58.8%), irritability was noted in 46 cases, which amounted to 29.0% of patients, high body temperature in 127 (54.9%), bone necrosis in 109 (6.41%), inability to chew and bite food – in 133 (57.5%), facial asymmetry – 172 (74.4%), soft tissue bleeding - 212 (91.7%), crepitation of bone fragments - 64 (27.7%), increased salivation – 150 (64.9%), rupture of the oral mucosa – 212 (91.7%) SOPR, malocclusion.

Conclusions

1. The prevalence of purulent-inflammatory complications of mandibular fractures among the population is 1.09%, according to the localization of fractures, 9.52% are central fractures, 24.7% are fractures of the canine area, 10.8% are mental areas, 10.8% are the body of the mandible, in 40.2% of cases there were fractures in the angle of the mandible

2. In patients with a fracture of the mandible, the quantitative and qualitative composition of the oral microflora was dysbiotic, 3-4 types of bacterial associations, non-anaerobic spore-forming bacteria were detected in 97% of cases, the number of Staphylococcus aureus increased by 2.15 times, a decrease in lactobacilli was observed by 2.5 times;

3. With the development of complications of mandibular fractures, there was a significant quantitative increase from the normal limits of gram-positive cocci of Staphylococcus aureus,

Staphylococcus epidermidis, Staphylococcus spp, Peptostreptococcus spp., it was proved that increased changes in the microflora with an increase in the duration of the disease, which leads to an unfavorable prognosis of complications of the disease; indicators of local immune factors, including lysozyme, phagocytic activity of neutrophils, sIgA index, in the development of complications of fractures of the mandible were studied and it was found that the lysozyme index decreased by 1.6 times, the phagocytic activity of neutrophils - by 1.24 times, and sIgA - by 1.5 times;

4. After the traditional treatment of fractures of the lower jaw, the results of clinical, microbiological and immunological indicators on the 1st and 7th days of treatment were compared, while no positive dynamics of dysbiotic changes in the state of the oral microflora of patients were revealed; in the group of patients receiving the recommended complex treatment, the total number of CFU anaerobes increased 1.6 times, the available lactoflora increased 1.7 times, positive results were also noted in terms of facultative microflora and approached the norm, pathogenic staphylococci were completely eliminated, the process of bone tissue regeneration was restored;

5. The use of ultrasonic aerosol treatment of the oral cavity for the prevention of inflammatory complications of fractures of the lower jaw improves blood and lymph circulation in pathologically damaged tissues, accelerates reparative processes in cells, reduces the development of post-traumatic purulent complications, increases the effectiveness of treatment.

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