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FEATURES OF THE CLINICAL PICTURE OF LOWER JAW FRACTURES

Najmiddinov Bokhodirjon Bakhritdin ugli
Assistant of the Department of Maxillofacial Surgery and Dentistry at TMA
(91) 174 33 44 doc.najmiddinov@gmail.com

Sarboev Erkin Rakhimboevich
Assistant of the Department of Maxillofacial Surgery and Dentistry at TMA
(93)6013559 erkin.sarboyev@mail.ru

Sabirov Elyor Ergashevich
Assistant (Phd) of the Department of Maxillofacial
Surgery and Dentistry at TMA
(90) 9723535 sabirov.elyor@tma.uz

Abstract
The number of facial injuries has more than doubled over the past 30 years, and along with the steady increase in facial skull injuries, their structure has changed significantly due to an increase in combined and multiple fractures. Long-term forecasts indicate a further increase in the frequency of such injuries and the complication of their nature due to the growth of technical equipment in production, the increase in the number of vehicles and their speed, as well as other manifestations of urbanization.

Keywords: Facial injuries, maxillofacial injuries, mandible fractures, mandible immobilization.

Introduction

Relevance

Non-gunshot fractures of the lower jaw (see Fig. 1), most often "linear", occur in "weakness areas": in the area of the central incisors, canine and mental foramen, angle of the lower jaw, condylar process. About 75% of fractures occur within the dentition and are, as a rule, open (infected). When fragments are displaced, the mucous membrane of the gum, which is intimately connected with the periosteum, almost always ruptures at the fracture site, and the damaged area becomes infected due to the contents of the oral cavity. Among injuries to the maxillofacial region, fractures of the lower jaw, caused by domestic trauma, predominate. Fractures of the facial skeleton bones account for 3.2-5.8% of the total number of injuries. The main share of injuries to the facial bones is due to fractures of the lower jaw, with which 77.0% to 90.0% of victims seek treatment in specialized medical institutions. Given the increase in cases of maxillofacial trauma, the problem of comprehensive and specialized care for fractures of the lower jaw remains relevant.

Results of the study

There are many reasons for complications after lower jaw trauma. The main ones are: late seeking of medical help by the patient, poor immobilization of fragments, insufficient reparative capacity of bone tissue, impaired trophism, wound infection, decreased resistance of the body. As a rule, trophic disorders in bone tissue are associated with impaired innervation. On the other hand, the large proportion of facial pain syndromes of neurogenic origin, their painful nature, problems of diagnosis and treatment predetermine the significance of this pathology both in scientific and practical terms. Despite the improvement of methods for treating lower jaw fractures, in the post-traumatic period we often encounter infectious and inflammatory complications, the development of which depends on a number of factors, including the presence of teeth with pathological processes in periodontal tissues. Significant factors in the development of complications are the state of the body's resistance, circulatory and innervation disorders in the fracture zone. Among the methods of treating fractures of the lower jaw, immobilization of the lower jaw with the help of dental splints and intermaxillary rubber traction is most widely used. When applying bimaxillary splints, professional and individual oral hygiene is difficult. With prolonged immobilization of the lower jaw, the function of the salivary glands suffers, which also worsens the hygienic condition of the oral cavity. Microorganisms of dental plaque are a direct cause of inflammatory processes in the periodontium. Normally, resistance mechanisms counteract microorganisms, but as soon as they overcome this protection in any place, an infectious process develops with tissue damage. Long-term presence of bronze-aluminum ligatures in the area of the necks of the teeth also leads to the development of an inflammatory process in the periodontal tissues, the occurrence of periodontitis - to obtain one of the experimental models of periodontitis, it is envisaged to apply a ligature to the neck of the tooth. In case of periodontal diseases, the application of dental splints leads to an exacerbation of periodontitis, which aggravates the course of the disease; in some cases, the application of splinting structures is impossible. Treatment of this category of patients is carried out both by conservative (orthopedic) and surgical methods; a combination of these two main types of specialized treatment is often used. A total of 1,627 case histories of victims with non-gunshot fractures of the lower jaw, who were treated inpatiently at the Andijan Regional Dental Clinic - Dental Center in 2014 - 2021, were studied. The largest number of lower jaw fractures occurs in the most socially active age group of the population: from 20 to 40 years. In recent years, there has been a tendency to an increase in the number of victims with jaw trauma at the age of 17-19. About 75% of lower jaw fractures occur within the dentition and are open, i.e. primarily infected. The frequency of lower jaw injuries in men is significantly (8 times) higher than in women. This is explained by the greater employment of men in industrial and agricultural production, in transport, including dangerous professions, more risky behavior, and more frequent abuse of alcoholic beverages. In case of combined injuries to the face, jaws and other areas of the body, the ratio between men and women is 8: 1.

In patients with mandibular fractures combined with inflammatory periodontal diseases, the latter affect the course of the post-traumatic period of fractures and are one of the factors in the development of purulent-inflammatory complications. A direct strong correlation has been proven between the frequency of purulent-inflammatory complications in mandibular fractures and the severity of periodontal disease. In turn, changes in the body that occur during trauma and purulent-infectious complications affect the condition of periodontal tissues. The course of the post-traumatic period of mandibular fractures is influenced by various factors, including periodontal

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diseases. A direct strong correlation has been proven between the frequency of purulent-inflammatory complications in mandibular fractures and the severity of periodontal disease. The negative effect of two-jaw dental splints on periodontal tissues has been studied. Surgical methods are an alternative to orthopedic treatment, but they lead to the development of a greater number of inflammatory complications. Therefore, patients with fractures of the lower jaw with severe periodontitis require a special approach when choosing a method of immobilization of fragments, and the study of the effect of various methods of immobilization of fragments of the lower jaw on periodontal tissues and on the development of complications of fractures in patients with chronic generalized periodontitis of severe degree is a pressing problem in dentistry.

Conclusion

When examining a patient with mandibular fractures, orthopantomography should be performed not only to diagnose the injury, but also to identify foci of chronic odontogenic infection. Surgical sanitation of the oral cavity should be a mandatory stage of treatment of patients with mandibular fractures. At the time of discharge from the hospital, good anatomical and functional results were achieved only in 30% of middle-aged and 50.0% of elderly patients, which dictates the need to search for new, more stable methods of conservative-orthopedic treatment, wider implementation of surgical treatment methods (functionally stable osteosynthesis) and physiotherapeutic procedures with minimal contraindications.

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