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ETIOLOGICAL FACTORS OF ACQUIRED DEFECTS AND DEFORMATIONS OF MAXILLOFACIAL AREA

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Abstract:
In this article the etiological factors that lead to defects and deformations of the maxillofacial area analyzes, based on literature sources on the relevant topics. Oncological diseases, injuries and gunshot wounds, odontogenic osteomyelitis, infectious diseases, adentia and their role in the appearance of deformations are considered.

Keywords: *dentistry, etiological factors, acquired defects, maxillofacial area.*

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INTRODUCTION:

Defects and deformations of the maxillofacial area are a diseases characterized by the infraction of the continuity of bone structures and soft tissues of the face, accompanied by scar changes of the mucosa and persistent interruption of the masticatory system, leading to a loss of aesthetic appearance and social maladjustment of people. Etiological factors that lead to defects and deformations of the maxillofacial area analyzes, based on literature sources on the relevant topics. This work was done at Sechenov University with supported by the "Russian Academic Excellence Project 5-100".

One of the causes of defects and deformities of the maxillofacial area are gunshot wounds. Their frequency in peace-time is 0.5% of the total number of mechanical injuries maxillofacial area. To date, there has been an increase gunshot injuries in peace-time associated with the deterioration of the crime situation and the probability of terrorist acts. Recently, the interest of dentists to gunshot injuries of the person, including explosive wounds, has increased significantly. This is due to a certain extent to the fact that there are traumatic and gas pistols in free sale, injuries of which are no longer rare. There are frequent injuries as a result of the using of illegally circulating military weapons and explosive ordnance. Gunshot wounds of the person in wartime in 68,3% of cases are accompanied by many fragmental fractures, at 25,6% of victims there are defects of bone structures and soft tissues. Modern technology and the development of the arms industry has radically changed the nature and severity of injuries. New models of small arms have a great damaging effect, and as a result, in modern conditions, increases the severity of injuries. They are characterized by extensive bone damage, increased primary necrosis zones and the number of secondary injuring elements [1-4].

An important place in modern dentistry is the orthopedic rehabilitation of patients with defects and deformities of the face and jaws in cancer. The significance of this problem increases due to the increase in the number of patients who underwent surgery for the oncotomy. The deterioration of the environmental situation contributes to the growth of cancer, including in the maxillofacial region, the number of malignant tumors is in 2-3 times higher than the number of benign, and metastasis occurs in every sixth patient. The absolute number of cases per 100 thousand population in Russia with malignant diseases of the oropharynx and nasopharynx in 2011 amounted to 2066 and 555 people, respectively. Literature data show that the most frequent malignant neoplasms are localized in the maxillary sinus (75-85%), the second place are the cells of the lattice labyrinth and the nasal cavity (10-15%), the most rarely affected are the sphenoid bone and frontal sinuses (1-2%). The incidence of malignant neoplasms of the oral cavity and paranasal sinuses has increased by 13.5% over the past 10 years [5-6].

The severity and number of defects and deformations of traumatic genesis are increasing every year. More than half of them are caused by road accidents, and a third-by falls from a height. At the same time, the majority of the victims are men (72.3%) in the most able-bodied age from 20 to 50 years (73.9%). Child trauma in this area due to the presence of rudiments increases the possibility of traumatic osteomyelitis, and immaturity of life support systems leads to aggravation of traumatic brain injury. Thermal affects occupy the third place among other injuries of the human body. In peace-time, face and head burns make up 24.5% of all burn injuries. Chemical burns account for 29.7% of the total number of burns and 3.4% of all traumatic injuries. Acids and alkali disrupt microcirculation and trophism in healthy tissues surrounding the burn zone. Burns with acids and salts of heavy metals cause the denaturation of proteins and a acute dehydration of tissues, which leads to the appearance of coagulation necrosis on the mucous membrane. Alkali burn is manifested by colliquation necrosis of the mucous membrane without the formation of a thick film, necrotic tissues have a gelatinous consistency. The defeat more profound than at a burn acids. Necrosis can capture all layers of soft tissue, especially on the gums and hard palate. For burns of III and IV degree is characterized by necrosis of tissues with the formation of scab, purulent inflammation, keloid scars [7-10].

Odontogenic osteomyelitis of the jaw, which captures all the structural components of the jaw bone and leads to its osteonecrosis, is one of the etiological factors of defects and deformities of the maxillofacial area. According to the prevalence of osteomyelitis of the jaw takes a third of all known osteomyelitis. The form of odontogenic osteomyelitis is observed in 75 % of patients suffering from osteomyelitis. Chronic destructive osteomyelitis often leads to a pathological fracture of the jaw. In the destructive-productive form of chronic osteomyelitis, multiple small sequesters are formed. In the productive form due to the predominance of the processes of active construction of bone matter in the periosteum, fistula and sequestration are absent; there is a deformation of the jaw, TMJ ankylosis, locked jaw, infiltrates of soft tissues [11-12].

In connection with the emergence of desomorphine discovered a fundamentally new on the clinical course of the disease, which can be interpreted as bone necrosis, osteonecrosis or biphosphate necrosis of the jaws, resulting in the occurrence of defects of jaw bones of the hard palate. The manufacture of this drug in artisanal conditions requires the use of various substances: codeine-containing drugs (Codelac, Terpincode, tetralgin, Pentalgin, sedal-M), crystalline iodine, red phosphorus, acetone, etc. These drugs and chemicals, which are used in the manufacture of desomorphine, can have a toxic effect on different organs and tissues, including hitting the bodies of the maxillofacial region [13-14].

In the literature of recent years, there are reports of the development of osteomyelitis of the jaws in persons suffering from drug addiction and using intravenously synthetic drugs, during the manufacture of which red phosphorus was used. Osteomyelitis, developing in this group of patients, characterized by severe, prolonged course, not amenable to conventional medical treatment. Many authors compare this form of osteomyelitis with the previously described in the literature phosphoric osteomyelitis of the jaws.

Another of the studied factors is tertiary syphilis, which also affects all tissues of the maxillofacial area and leads to severe irreversible changes in its anatomical structures. A characteristic feature of tertiary syphilis is the formation of the patient's oral syphilis, accompanied by a violation of the configuration of the soft palate, arches, tongue, perforations of the hard palate, with the formation of oronasal communication, the destruction of nasal cartilages with the formation of a characteristic saddle deformation of the nose [15].

Also, one of the causes of defects are the consequences of surgical operations in the maxillofacial area. Currently, there are many proposals for the prevention of aesthetic defects and dysfunction. Widespread closure of skin defects with free patches or skin on the leg, exoprosthesis, the formation of support under the eyes. Surgical approaches to organs without large facial incisions are being developed. However, after surgery, complications often occur in the form of postoperative defects in the area of the anterior, middle and other parts of the hard palate or on the border of the hard and soft palate. Their number reaches 75% or more. The main causes of such complications are: necrosis of mucous-periosteal flaps due to a violation of their nutrition; failure of sutures; violation of reparative regeneration; the presence of concomitant pathology of internal organs or reduced immunity; inflammatory infiltrates or suppuration of wounds, hematomas or acute infectious diseases in the near postoperative period [16].

Primary complete edentulism is a very rare and very severe anomaly in the development of teeth, which leads to a complete absence of the rudiments of the teeth at the stage of their formation. Complete primary edentulism in some cases can be caused by chromosomal aberrations, gene mutation, as well as joint actions of many genes and environmental factors. Such multifactorial diseases are a common group of hereditary genetic syndromes, congenital malformations and anomalies of the dentition, facial and cerebral skull [17-18].

Another reason that leads to a defect in the jaw is atrophy of the alveolar processes of the jaws, which is usually most pronounced in cases of complete absence of teeth. Complete loss of teeth is a common pathology and is observed in people over 60 years – in 25% of cases [19].

It should be noted the increase in the prevalence of tattoos in recent years. Combined with them, the number of medical complications that lead to the development of infectious inflammation in the skin due to the introduction of infection into the skin with a non-sterile needle has increased. The most common pathogens of local skin infections are Staphylococcus aureus and Pseudomonas aeruginosa. A form of manifestation of skin infections on the face caused by these pathogens is impetigo, it is also possible to develop ecthyma, skin abscesses and phlegmon of subcutaneous tissue, which lead to defects in the maxillofacial area. It is found that most red ink contains mercury, and in blue and green – cobalt. The effects of these metals on the human body are well known, and their role in the occurrence of cancer is undeniable and confirmed by numerous studies.

CONCLUSION:

Thus, defects and deformities of the jaws are accompanied by a significant loss of teeth and pronounced asymmetry of the face, which leads to the loss of the aesthetic appearance of the person. Edentulism is the cause of occlusion disorders, which leads to the impossibility of normal chewing food, resulting in the formation of diseases of the gastrointestinal tract, and this often leads to irreversible changes in the General somatic status of the patient. The consequence of structural and functional disorders of the maxillofacial region is a change in the mental state and social status of the patient. The tasks of restoring the patient's face, chewing, swallowing and returning him to work, as

well as to perform other important social functions, as a rule, require the use of orthopedic methods of treatment. Therefore, the complex of interdisciplinary rehabilitation activities in the foreground is the joint work of dentists-surgeon and orthopedist.

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