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SPECIES COMPOSITION OF MICROORGANISMS IN LOWER JAW FRACTURES IN SURVEYED PATIENTS

[1]*Rakhimov Z.K.*, [2]*Kurbanova S.Yu.*, [2]*Yakubova N.A.*, [2]*Turdiyev P.Q*
[1]*Bukhara State Medical Institute*
[2]*Tashkent State Dental Institute*
Tashkent, Uzbekistan

Резюме

Изучены результаты обследования 72 больных с односторонним переломом, которые были на стационарном лечении в клинике хирургической стоматологии областной клинической больницы города Бухары.

Цель исследования. Определить распространённость воспалительных осложнений переломов нижней челюсти.

Микробный пейзаж полости рта был представлен стрептококками (97,7%), стафилококками (89,3%). На долю лактобактерий приходилось 48,5%. Частота встречаемости грибов рода Candida составила 53,2%. У пациентов не выявлялось условно-патогенных энтеробактерий, дифтероидов, фузобактерий. Наличие в полости рта у больных в переломах нижней челюсти приводило к микробиологическому дисбалансу, нарастающему в динамике традиционного лечению, и проявлялось уменьшением количества симбионтов и увеличением высеваемости условно-патогенных микроорганизмов.

Ключевые слова: полости рта, переломы нижней челюсти, микроорганизмы, микробиоценоз.

Хулоса

Buxoro shahridagi viloyat klinik shifoxonasining jarrohlik stomatologiya bo‘limiga yotqizilgan 72 nafar bir tomonlama pastki jag‘i singan bemorlarni tekshirish natijalari o‘rganildi.

Tadqiqot maqsadi. Pastki jag‘ sinishlarning yallig‘lanish asoratlari tarqalishini aniqlash.

Og‘iz bo‘shlig‘ining mikrobial peyzaji streptokokklar (97,7%), stafilokokklar (89,3%) bilan ifodalangan. Laktobakteriyalar ulushi 48,5% ni tashkil etdi. Candida avlodi zamburug‘larining paydo bo‘lish chastotasi 53,2 foizni tashkil etdi. Bemorlarda opportunistik enterobakteriyalar, difteroidlar, fusobakteriyalar aniqlanmadi. Mandibulyar singan bemorlarning og‘iz bo'shlig'ida disbiozning mavjudligi an’anaviy davolash dinamikasida ortib borayotgan mikrobiologik muvozanatning buzilishiga olib keldi. Bu o‘z navbatida simbiontlar sonining kamayishi va opportunistik mikroorganizmlar miqdorining ortishi bilan namoyon bo‘ldi.

Kalit so‘zlar: og’iz bo‘shlig’i, pastki jag‘ sinishi, mikroorganizmlar, mikrobiosenoz.

Summary

The results of the examination of 72 patients with unilateral fractures, who were hospitalized in the clinic of surgical dentistry of the regional clinical hospital in Bukhara, were studied.

Objective: To determine the prevalence of inflammatory complications of mandibular fractures.

The microbial landscape of the oral cavity was represented by streptococci (97.7%), staphylococci (89.3%). The share of lactobacilli accounted for 48.5%. The frequency of occurrence of fungi of the genus Candida was 53.2%. Patients did not reveal opportunistic enterobacteria, diphtheroids, fusobacteria. The presence in the oral cavity of patients with fractures of the lower jaw led to a microbiological imbalance that increased in the dynamics of traditional treatment, and was manifested by a decrease in the number of symbionts and an increase in the sowing of opportunistic microorganisms.

Key words: oral cavity, mandibular fractures, microorganisms, microbiocenosis.

According to WHO, up to 300 thousand people of working age die from injuries every year, 7-8 million become disabled. Issues of reliable anti-infective protection are of paramount importance in extreme medicine. This is due to the fact that most of the injured patients that the doctor encounters are at high risk for the development of life-threatening infectious complications. Antibacterial drugs have long been one of the most prescribed critical conditions in medicine. Up to 90% of injured patients receive antibiotics at some stage of treatment. Thus, antibacterial chemoprophylaxis and antibacterial chemotherapy, not only today, but also in the foreseeable future, will retain undoubted leadership as first-line methods in the fight against infection.

The species structure of pathogens and their sensitivity to antibiotics tend to change periodically. Without knowledge of the microflora and its sensitivity to antibiotics, the effectiveness and safety of antibiotic therapy becomes problematic. The spectrum of microorganisms tends to expand and increase the role of nerpathogens — opportunistic pathogenic bacteria, which manifest their pathogenic features against the background of immunosuppression.

In patients with jaw fractures due to the impossibility of proper dental care (accumulation of food residues in the interdental spaces, traumatized mucous membranes of the cheeks and alveolar processes on dental lacing structures, the presence of bone and soft tissue wounds, impaired metabolic processes in injured tissues), prerequisites for the formation of and an increase in dental plaques, the accumulation of both pathogenic and con ditionally pathogenic microflora, which can cause inflammatory complications [8].

It is known that one of the main factors in the development of pyoinflammatory complications is a violation of nonspecific and specific resistance of the body [1,3,7]. Studies by a number of authors have established that in the post-traumatic period with mandibular fractures, patients experience a decrease in body reactivity, which directly affects the reparative process, the occurrence of complications and an increase in rehabilitation time [2,3,4,6,10].

The development of purulent-inflammatory complications of the lower jaw is a significant problem, not only medical, but also social, since it poses a real threat to the

life of the patient's health. Last but not least, the lengthening of the terms of treatment of patients plays a role, which significantly reduces the ability of patients to work. With prolonged illness, patients may develop mental and depressive changes. According to the World Health Organization (WHO), about 300 million people worldwide currently suffer from depression. The development of technology, the acceleration of the pace of life, the growing competition are the cause of the increase in stress factors leading to the development of depressive states in the population, including highly developed countries. It is believed that in the coming decade, among psychotropic drugs, antidepressants in terms of sales will come out on top [11]. It is known that in developed countries about 30% of the population constantly or periodically take psychotropic drugs for various indications, that is, the number of people in need of psychopharmacological agents is in the hundreds of thousands. For this recent time, several new original substances have been studied that have the above properties [12,13].

The frequency of purulent-inflammatory complications in mandibular fractures continues to be high. Numerous studies have been devoted to questions about changes in the nature of pathogens of purulent-inflammatory processes in the maxillofacial region. There is not only a change in the genus of the pathogen, but also changes within one species. The success of complex treatment of mandibular fractures in combination with periodontitis largely depends on local antimicrobial therapy. Amoxicillin was chosen as such an antibiotic.

It is necessary to emphasize the expediency of using amoxicillin for the prevention and local treatment of inflammatory periodontal diseases in patients with mandibular fractures during the period of immobilization of fragments with dental splints. Mechanical irritation of periodontal tissues with wire ligatures and the impossibility of full cavity hygiene create conditions for the development or exacerbation of the existing inflammatory process in periodontal tissues [9].

Purpose of the study. To determine the prevalence of inflammatory complications of mandibular fractures.

Research methods. The results of the examination of 72 patients with unilateral fractures, who were hospitalized in the clinic of surgical dentistry of the regional clinical hospital in Bukhara, were studied. The control group consisted of 20 people from practically healthy people.

Material for bacteriological examination from the teeth of the gingival pocket was taken using sterile paper strips. At the same time, saliva was collected in a test tube at the time of the study. Cultures for the isolation of microorganisms with anaerobic and facultative anaerobic types of respiration were incubated in a thermostat at 37°C for 24–48 hours. Further identification of the isolated microorganisms was carried out by conventional methods, as well as using commercial test systems for the identification of staphylococci, streptococci, and anaerobes.

Research results. To accomplish the tasks set, the colonization by microorganisms of the oral mucosa of patients of the examined groups was studied.

The microbial landscape of the oral cavity was represented by streptococci (97.7%), staphylococci (89.3%). The share of lactobacilli accounted for 48.5%. The frequency of occurrence of fungi of the genus Candida was 53.2. Patients did not reveal opportunistic enterobacteria, diphtheroids, fusobacteria. An analysis of the microbiocenosis of the oral cavity in

dynamics during a repeated study of the comparison group did not reveal any differences in flora from the initial contamination. The study of the microflora of patients of the main group at the beginning of the study showed that symbionts (76.0%) dominated in the microflora of the oral cavity before traditional treatment, while opportunistic microorganisms accounted for 24.0%.

The microbial landscape of the oral cavity was represented by streptococci (93.4%), staphylococci (87.6%). Lactobacilli accounted for 47.5%. The frequency of occurrence of fungi of the genus Candida was 54.2. No opportunistic enterobacteria, diphtheroids, fusobacteria were detected in patients.

A re analysis of the microbiocenosis of the oral cavity of patients of the main group was performed after 14-30 days in the dynamics of traditional treatment, which showed that in the microflora there is a decrease in the sowing of symbionts in the oral cavity (51.4%) and an increase in opportunistic microorganisms (48.6). Noteworthy is the increase in the frequency of occurrence of fungi of the genus Candida (96.2%), the appearance of representatives of the Enterobacteriaceae family (E. coli 15.5%, Proteus spp. 31.9%), against the background of a decrease in the content of lactobacilli (9.1%) , staphylococci (48.6%) and streptococci (67.5%). It is necessary to emphasize the appearance of Klebsiella and the presence of Haemophilus influenzae and Neisseria.

So, the presence in the oral cavity of patients with mandibular fractures led to a microbiological imbalance, which increased in the dynamics of traditional treatment, and was manifested by a decrease in the number of symbionts and an increase in the sowing of opportunistic microorganisms. Such microbiocenosis can contribute to the development of inflammatory diseases of the oral mucosa, which must be taken into account when planning treatment.

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