

THE EFFICIENCY OF LOCAL IMMUNOCORRECTION THERAPY IN THE TREATMENT OF PATIENTS WITH TRAUMATIC OSTEOMYELITIS FRACTURES OF THE MANDIBLE

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Annotation

The purpose of this study is to evaluate long-term results of complex treatment of patients with traumatic osteomyelitis in mandibular fractures (MF). We examined 93 patients with MF. Depending on the treatment, all patients were divided into 2 groups: Group I-42 patients with MF, who had traditional and orthopedic treatment, Group II-52 patients with MF, who in addition to traditional and orthopedic treatment, were additionally prescribed imudon. The study showed that combined use of imudon was highly effective in the treatment of patients with traumatic osteomyelitis of MF.

Key word: traumatic osteomyelitis, mandibular fractures, treatment, imudon.

A special role in the development of purulent – inflammatory complications of mandibular fractures is played by the terms of treatment of patients for specialized medical care. The later patients receive it, the greater the likelihood of post-traumatic purulent-inflammatory complications [1,14].

Among all complications of mandibular fractures, according to a number of authors [4,11,12,15], the share of postoperative falls from 5,5 to 14,1%. Despite modern methods of their prevention, there is no tendency to reduce the frequency of post-traumatic complications. In order to find an adequate solution to this problem, there is a necessary need to find new and effective ways to influence the infectious process, methods of stimulation of local and General immunity of the body.

In case of late or unsatisfactory immobilization of the fragments, secondary intracranial microtrauma of the surface layers of the bone in the fracture region is possible, which can cause suppuration of the soft tissues and end parts of the lower

jaw fragments and prevents the formation of the primary bone adhesions, which is associated with a violation of the biosynthesis of the collagen matrix.

The high frequency of fractures of the lower jaw and the difficulty of choosing the method of fixing the fragments in the development of chronic destructive process in the fracture region, when a bone defect is formed, worsens the results of treatment. In addition, with comminuted fractures of the lower jaw body, the use of a bone suture does not give the desired effect, that is, does not provide a rigid fixation of the fragments. The above was the reason for an in-depth study of this problem.

The aim of this study is to study the effect of local immunocorrecting therapy on the clinical course of traumatic osteomyelitis fractures of the mandible.

Materials and methods of research. The analysis of the clinical material of the Department of maxillofacial surgery of Bukhara regional multidisciplinary medical center for 5 years showed that 93 patients with fractures of the lower jaw, the age range of which ranged from 17 to 62 years, were hospitalized. Of these, 57 were with unilateral fracture, 36 – with bilateral fractures of the lower jaw. The control group for comparison included 31 practically healthy people of identical age category.

Table 1. Shows the distribution of patients by sex and age.

Table 1.

	Up to 20 years	20-29 лет	20-29 years old	40-49 years old	50 and older	total
Man	4	19	20	16	8	67 (72,1%)
Women	4	7	9	6	0	26 (27,9%)
Just	8	26	29	22	8	93 (100%)

One of the factors in the development of traumatic osteomyelitis of the mandible is untimely, namely the later provision of specialized care. During the examination it was revealed that 68.3% of patients were admitted to the hospital in 1 day, 24.5% – in 3 days, 5.2% - in 4 – 8 days, 1.8% – in 9 – 30 days, 0.2% - in

more than 1 month. It was noted that the prevailing number of patients (92.8%) sought specialized care within 3 days after injury; 7.0% of patients were hospitalized later – in the period from 4 days to 1 month. Due to the fact that the immobilization of the fragments of the lower jaw is not made in the early stages, in the fracture slit developed purulent – inflammatory process. The source of purulent infection was a tooth with necrotic pulp or pathological process in periapical tissues. In cases of emergency elimination of the focus of infection in the initial stage of development of acute traumatic osteomyelitis of the lower jaw against the background of appropriate antimicrobial therapy and reliable fixation of fragments, the inflammatory process was stopped.

From years of experience in the treatment of patients with fractures of the lower jaw, it can be concluded that with traumatic osteomyelitis of the lower jaw, there is an inhibition of the immunological reactivity of the body.

The mechanism of action of the drug Imudon is based on the strengthening of specific and nonspecific factors of immunity. Imudon is a drug manufactured by the company "solve Pharmaceuticals" (France), which includes inactivated representatives of microflora, most often sown in inflammatory processes of the oral cavity, (Lactobacillusacidophyllus, Lactobacillushelveticum, Lactobacilluslactis, Lactobacillusfermentum, Streptococcuspyogenes группа A, Enterococcusfaecalis, Enterococcusfaecium, Streptococcussangius, Streptococcus aureus, Klebsiellapneumoniae, Corynebacterium pseudodiphthericum, Fusobacteriumnucleatum, Candidaalbicans). Imudon is immunocorrector with the properties of the vaccine local action — stimulates protective power of the mucous membrane of the oral cavity. Acting through a system of mechanisms of immunity, it causes the following effects:

- there is an increase in the activity of phagocytes with a qualitative improvement in phagocytosis;
- promotes an increase in the content of the lysozyme enzyme in saliva, which has bactericidal activity, the induction of interferon;

- stimulates and increases the number of immunocompetent cells responsible for antibody production;
- stimulates and promotes sIgA, which plays an undeniable role in the mucosal protection system.

Imudon has rapid antibacterial and preventive effects, and therefore it can be used to prevent inflammatory diseases of the oral cavity and pharynx. The undeniable advantages of treatment with the drug Imudon are also local action; safety; proven clinical efficacy in bacterial and viral infections; a wide range of actions and indications for use; reducing the need for antibacterial agents; the possibility of combining with all types of treatment; elimination of unpleasant smell from the mouth; a convenient form of application (tablets for sucking with a pleasant taste of mint). After taking the drug Imudon is not recommended to eat for 30 minutes and produces irrigation of the oral cavity for 60 minutes. Imudon is easily tolerated by patients, the development of side effects when used in recommended doses is noted only in isolated cases.

In addition, Imudon has no analogues in its therapeutic class.

Depending on the treatment, all patients were divided into 2 groups:

Group I - 42 patients with a fracture of the mandible, who were treated with traditional (drug) and orthopedic methods;

Group II - 51 patients with fracture of the lower jaw, which, along with traditional and orthopedic treatment was additionally applied immuno corrective the drug Imudon (for 8 таблеток per day – 1 tablet with an interval of 1 hour up to 2 days before surgery).

Drug therapy consisted of an antibacterial drug - Ceftriaxone, sulfanilamide preparations, the introduction of desensitizing drugs, painkillers. To study the indicators of nonspecific resistance, blood was taken from the ulnar vein in the volume of 10 ml, stabilized in a 3.8% solution of sodium citrate, then centrifuged 8000 rpm for 10 min. Components of complement C3 and ceruloplasmin were studied by immunochemical method on the analyzer "CofasEmira" company "ROCHE" (Switzerland). The obtained data were expressed in IU/ml and mg/DL.

The reagent kits used in the work were kindly provided by ROCHE (Switzerland). In order to identify indicators of circulating immune complexes (CEC), a 7.0% solution of polyethylene glycol-5000 was used. The study results were expressed in arbitrary units (Xaskova et. al., 1978). The level of average molecular peptides in the blood was determined by the method of Gabrielyan AI (1981), and the values were expressed in conventional units. The obtained numerical values were subjected to statistical analysis using the software package.

Research results and discussion. Based on the data of conventional therapy, it was shown that the level of average molecular peptides both before and after treatment significantly exceeded the background level of the control group by more than 2 times. The content of average molecular peptides decreased at the end of treatment ($p < 0.05$). High values of the level of medium molecular peptides testified to the unfavorable clinical course of the inflammatory process, as they have toxicity and thereby reduce local resistance in the body of patients with a fracture of the lower jaw.

Conclusions: thus, taking into account that traumatic osteomyelitis of the lower jaw develops with low immunological reactivity of the body, treatment should be carried out against the background of strengthening of nonspecific and specific factors of immune protection of the oral mucosa.

The combined use of Imudon – an immuno-correcting drug of bacterial origin for topical use in the oral cavity, which contributes to the strengthening of protective mechanisms, was highly effective in the complex treatment of patients with traumatic osteomyelitis fracture of the lower jaw.

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