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OPTIMAL METHODS OF TREATMENT OF PURULENT-INFLAMMATORY PROCESSES OF MAXILLOFACIAL REGION

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Annotation: This article covers the issue of purulent-inflammatory pathologies of the maxillofacial region, as well as the factors that cause them and possible complications. The author analyzes effective treatment options, including the use of drugs and surgery. The importance of prevention and oral hygiene is emphasized. The article will be interesting and useful for dentists and medical professionals, as well as for readers interested in health problems and self-treatment.

Keywords: purulent-inflammatory diseases, maxillofacial region, odontogenic abscesses, phlegmons, diagnosis, virulence of microflora, microcirculation, antimicrobial resistance, sepsis, inflammatory processes.

Relevance. Purulent-inflammatory diseases of the maxillofacial region (PFD of the maxillofacial region) remain one of the most widespread and complex problems of modern surgical dentistry and maxillofacial surgery, the main cause of intracranial complications and septic conditions, temporary disability among the population. Despite the fact that primary prevention of GVHD of the maxillofacial region, consisting in timely sanation of chronic odontogenic infection foci, is the most effective, early diagnosis and treatment can reduce the risk of the most serious complications of GVHD of the maxillofacial region [3,8].

Acute purulent-inflammatory diseases (APPD) remain one of the most widespread types of pathology. This issue is problematic for dentistry where, despite the development of a large number of means and methods of combating acute purulent infection, there is also an increase in the incidence of acute purulent-inflammatory diseases of the maxillofacial region and an increase in the number of patients with severe forms and unfavorable outcomes (Shargorodskiy A.G., 2001; Prokhvatilov G.I. et al., 2003; Kozlov V.A., 2006, etc.). Treatment of patients with OGVZ should be complex, including operative treatment and conservative measures. The latter are conditionally subdivided into general and local effects. General therapy is necessary to combat infection and intoxication, restore the balance between the body and the environment, activation of nonspecific and specific reactivity of the body, normalization of the functions of organs and systems. Local treatment in the acute phase of inflammation is carried out to create an outflow of pus and exudate from the purulent focus, accelerate necrolysis, limit the zone of inflammation and necrosis spread, reduce intra-tissue pressure, resorption of decay products, as well as to normalize microcirculation, improve regeneration and create unfavorable conditions for microorganisms [1].

The relevance of this scientific study lies in the fact that acute odontogenic inflammatory diseases of the maxillofacial region (MFR) represent an important medical problem in surgical dentistry. The frequency of inflammatory processes in the maxillofacial region ranges from 55, 65%, and in the structure of acute purulent-inflammatory diseases of the maxillofacial region reaches 69.5% [7].

The problem of optimization of complex treatment of patients with purulent-inflammatory diseases (PID) of the maxillofacial region (MFR) does not lose its relevance due to the aggravation of the course of the disease, the tendency to generalization of the process and the steady increase in morbidity rates, the number of complications, relapses and adverse outcomes. According to statistical data, patients with purulent-inflammatory diseases of the maxillofacial region make up about 15-20% of patients applying to dental polyclinics and more than 70% of patients receiving specialized medical care in departments of maxillofacial surgery. Patients hospitalized with the diagnosis of abscess or phlegmon account for 25% to 65% of the total number of patients [3,4, 6].

Thus, purulent-inflammatory diseases of the maxillofacial region are a serious problem that requires correct and timely treatment. Optimal treatment includes drug therapy and surgical intervention, as well as prophylaxis consisting of oral hygiene, regular check-ups with a dentist and a healthy lifestyle.

Materials and methods of research. During 2021-2024, 285 patients with purulent-inflammatory diseases of the maxillofacial region were under our observation in the maxillofacial surgery department of the Bukhara Regional Multidisciplinary Medical Center. On admission to the department all patients were examined by a surgeon-dentist and maxillofacial surgeon on duty, a detailed history of life and disease was collected. General clinical laboratory tests required for emergency care were performed on the patients. The operation plan was made together with anesthesiologists, if necessary, with other profile specialists in the presence of concomitant diseases. Additional specialized investigations were performed when indicated. If the patient's condition was severe, infusion therapy was carried out before surgery to stabilize the functions of vital organs and systems. As a rule, surgical intervention was performed under intravenous anesthesia and always after premedication. In the course of surgery, the location of purulent-inflammatory process in the BFO, the size of the lesion and the degree of spread were clarified. The recovery stage included detoxification, anti-inflammatory, desensitizing therapy, etc. According to the indications and results of patient observation in dynamics, adjustments were made to the treatment regimen. All medical documentation was also analyzed; statistical methods were used to determine the average duration of treatment, the average number of bed-days required for the treatment of various nosological forms of purulent-inflammatory diseases of the NPO, depending on the prevalence, duration of the pathology, the number of affected anatomical zones and other factors.

We examined 285 patients with purulent-inflammatory diseases of the maxillofacial region. As a result, a control group of 150 patients was formed. Depending on the type of local therapy the patients were divided into 3 groups by random sampling method

Localization of purulent-inflammatory disease of the maxillofacial area	**Groups**		
	1	**2**	**3**
	conventional therapy	**conventional therapy + Propolis 30mg**	**conventional therapy + Propolis 30mg +laser photodynamic therapy**

One anatomical space (n=67)	17	25	25
Two anatomical spaces (n=52)	20	15	17
Three or more anatomical spaces (n=31)	13	10	8
Total	50	50	50

Group 1 consisted of 20 patients in whom local treatment after opening of the purulent focus, exudate evacuation and drainage installation was limited to regular washing with antiseptic solutions - furacillin in the ratio of 1:5000 and 5% chlorophylipt solution during daily dressings, and also laser photodynamic therapy (LPT) was performed.

The 2nd group consisted of 20 people who were included in the local treatment complex after traditional wound treatment with dressings with “Propolis 30 mg” ointment;

The 3rd group consisted of 20 patients who were included in the complex local therapy after washing the purulent wound with antiseptic solutions (conventional therapy) during daily dressings with water-soluble polyethylene glycol (PEG) based ointment “Propolis 30 mg” in the form of a dressing with the application of local laser photodynamic therapy (LPT).

RESULTS AND DISCUSSION

Patients in all groups of the study were first of all treated surgically: extraction of the causative tooth, opening and drainage of the purulent focus.

Taking into account the prevalence of the inflammatory process and the nature of the course of the disease, all patients were prescribed complex treatment: in the acute period of the disease - therapy with broad-spectrum antibacterial drugs, and then selective prescription of antibiotics taking into account the composition and sensitivity of microflora, detoxification therapy, including colloid and crystalline solutions (glucose solution 5%, saline solutions - 0.9% sodium chloride, hemodez, rheopolyglukin, metrogil-100), desensitizing therapy (dimedrol, suprastin), vitamin therapy and symptomatic treatment depending on the disease clinic.

In local treatment in patients after opening of abscess or phlegmon, during daily dressings, drains were changed, the wound surface was irrigated with antiseptic solutions (3% hydrogen peroxide, furacilin 1:5000, chlorophyllint 5%), early secondary sutures were applied.

Then the patients of the 2nd and 3rd groups (after LFDT procedure) were applied bandages with ointment on water-soluble polyethylene glycol (PEG) base “Propolis 30 mg”. “Propolis 30 mg” is a combined preparation, has antimicrobial, anti-inflammatory, local anesthetic, regenerating effect. Hydrophilic and hyperosmolar base of the ointment is a mixture of polyethylene oxides (polyethylene glycols) with molecular weights of 400 and 1500 (PEG-400 and PEG-1500), which provides dehydrating (moisture-absorbing) and osmotic action on tissues, which is 20 times stronger than 10% sodium chloride solution and lasts up to 18-20 hours. Hyperemia and edema of soft tissues in the area of inflammation significantly decreased. In the control group (25 patients), treated by traditional methods, 88,3 % of patients had relief of these symptoms on average 2,3±1,05 days later than in the main group, and 11,7 % of patients required 2,9±1,3 days more time for relief of these clinical signs.

CONCLUSIONS.

Purulent inflammatory diseases of the maxillofacial region can be caused by various reasons such as bacterial infection, trauma, and others. Optimal treatment includes drug therapy and surgical methods, as well as a preventive approach such as proper oral hygiene and a healthy

lifestyle. It is important to seek medical attention at the beginning of the disease to avoid possible complications and preserve the health of the maxillofacial region. Inclusion of dressings with “Propolis 30 mg” ointment and LFDT sessions in the traditional treatment regimen for purulent-inflammatory diseases of the maxillofacial region restores microbiological, immunological and biochemical parameters to normal values, which is positively reflected in clinical observations - signs of inflammation are eliminated on the 3-4 day of treatment, and the healing time of purulent wounds is significantly reduced (up to 38% on average), preventing the formation of purulent scars and the development of complications.

In order to objectivize pathological therapy, a complex scheme of joint application of LFDT and polyethylene glycol-based ointment “Propolis 30 mg” was developed and implemented, allowing to reduce the period of hospitalization of patients to an average of 35%.

References

1. Agatieva E.A., Ksembaev S.S., Islamov R.R., Galimov R.A.2 Modern principles and methods of local treatment in acute purulent-inflammatory diseases of maxillofacial region// Russia. Ural Medical Journal, №09 (192) 2020, pp. 9 - 20, DOI 10.25694/URMJ.2020.09.06
2. Amanullaev R.A., Ikramov G.A., Saparbaev M.K., Ruzibaev D.R. // Modern aspects of complex treatment of purulent-inflammatory diseases of the maxillofacial region. Integrative Dentistry and Maxillofacial Surgery Volume 1 | Issue 1 Tashkent. 2022 -C 23-26
3. Ikramov G., Suvonov K., Ashurov S., Abdulkhaev J.// Optimization of treatment of purulent-inflammatory diseases of maxillofacial region// International scientific-practical conference. Actual questions of surgical stomatology and dental implantology, 1(1) 2022, -C.37-38. https://inlibrary.uz/index.php/dental-implantology/article/view/16851. Tashkent.
4. Shayeva R.G. Dynamics of patients with inflammatory diseases of maxillofacial region of Bukhara region// Journal of Advanced Research and Stability Volume: 02 Issue: 12| Dec-2022 -C 747-751.
5. Shomurodov K.E. Features of cytokine balance in gingival fluid in odontogenic phlegmon of maxillofacial region / Shomurodov K.E. // Physician Postgraduate. - 2010. - №42(5.1). - C. 187-192.6
6. Shevchenko L.V., Pakhlevanyan S.G., Zhuravlev Y.I., Purulent-inflammatory diseases of the maxillofacial region in patients with polymorbid conditions - a multidisciplinary problem (literature review)// Series Medicine. Pharmacy. 2018. Vol. 41, No. 3. -C. 436-448.
7. Markarov A.E., A.I. Orazvaliev, Martirosov A.V., Krasnov N.M., Shen P.A., Nikolskaya I.A., Bugayan S.A., Kamskov M.S., A.A. Peym. Statistical analysis of purulent-inflammatory diseases of the maxillofacial region// Medical Alphabet No. 7 / 2022, Stomatology (2). RF. GBUZ “F.I. Inozemtsev State Clinical Hospital” DZM, Moscow 2 FGAOU VO RNIMU named after N.I. Pirogov of the Ministry of Health of Russia -C 40-45.
8. Mirzoev M.Sh., Shakirov M.N., Gafarov H.O. Features of drainage of purulent spaces in the complex treatment of patients with putrefactive-necrotic phlegmons of the maxillofacial region // Department of maxillofacial surgery with pediatric dentistry TIPPMK. Bulletin of the Academy of Medical Sciences of Tajikistan-Volume IX No. 3. 2019. -C 321-325.