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MONITORING OF PATIENTS WITH INFLAMMATORY DISEASES OF THE MAXILLOFACIAL REGION IN THE DEPARTMENT OF MAXILLOFACIAL SURGERY AT TASHKENT STATE MEDICAL UNIVERSITY

Shomurodov K. E.
DSc, Professor, Head of the Department of Maxillofacial Surgery,
Tashkent State Medical University.

Gizatullina A. M.
Assistant, Department of Maxillofacial Surgery,
Tashkent State Medical University.

Abstract
According to literature data, purulent-inflammatory diseases of the maxillofacial region (MFR) account for 40% to 60% of the total number of surgical dental diseases. Issues regarding the organization of care for patients with purulent-inflammatory diseases of the maxillofacial region remain relevant. Currently, the main treatment method for patients with purulent-inflammatory diseases of the maxillofacial region is comprehensive therapy, which involves combining surgical procedures (abscess incision, drainage, etc.) with the use of pharmacological agents. Prognosis of purulent-inflammatory processes in the maxillofacial region is one of the pressing issues in dentistry due to the high prevalence of these diseases, the severity of the clinical course, and the possibility of developing life-threatening complications.

Keywords: Purulent-inflammatory diseases, maxillofacial region (MFR), abscesses, phlegmons, odontogenic infection, antibiotic resistance.

Introduction

An analysis of statistical data conducted at the Tashkent State Dental Institute shows that patients with purulent-inflammatory diseases of the maxillofacial region constitute a significant share of those seeking dental care—about 15-20%. Among patients requiring specialized surgical treatment in MFR departments, their number exceeds 70%. Among hospitalized patients with diagnoses of abscess and phlegmon, this figure ranges from 25% to 65%.

In the conditions of the Tashkent State Dental Institute (TSDI), the problem of optimizing comprehensive treatment for this category of patients remains relevant due to the tendency towards a more severe course of diseases, their generalization, and the ongoing increase in morbidity, the number of complications, relapses, and unfavorable outcomes.

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The prevalence of purulent-inflammatory diseases is caused by a number of factors. In most cases, the high level of morbidity is associated with the lack of public awareness about caries and its complications, as well as the limited availability of qualified medical care in remote regions. This leads to patients from rural areas being forced to turn to administrative centers, which results in loss of time, delay in providing emergency care, deterioration of the condition, and spread of the purulent-inflammatory process to surrounding tissues. These factors contribute to an increase in the number of patients with an aggressive course of purulent-inflammatory MFR diseases and the spread of infection to adjacent anatomical areas. The prolonged and severe course of the pathological process leads to a long-term loss of work capacity, which negatively affects the material and social status of the patients. Generalization of the infection can cause such life-threatening complications as thrombophlebitis of the facial veins, cavernous sinus thrombosis, mediastinitis, sepsis, and others, including cases of fatal outcomes.

Aim of the study: To monitor clinical cases of purulent-inflammatory diseases of the maxillofacial region in patients who received specialized medical care in the Department of Maxillofacial Surgery at the Tashkent State Dental Institute during 2022-2023.

Materials and Research Methods

The present study is based on the analysis of clinical cases of patients with purulent-inflammatory diseases of the maxillofacial region (MFR) who were hospitalized in the Department of Maxillofacial Surgery at the Tashkent State Dental Institute (TSDI) from 2022 to 2023. During the specified period, 750 patients of this category were under the researchers' observation.

Examination and Treatment Methods:

Upon admission to the hospital, all patients underwent a comprehensive examination by the on-duty dental surgeon and maxillofacial surgeon.

A thorough collection of life and disease history was carried out.

Basic general clinical laboratory blood tests (complete blood count with leukocyte formula, biochemical analysis, determination of coagulation parameters) were performed to assess the general condition and determine the tactics for emergency care.

The strategy for surgical intervention was developed individually for each patient in consultation with the anesthesiologist.

Other narrow specialists were involved if a comorbidity requiring additional assessment was present.

Additional instrumental and special examination methods were performed according to clinical indications (radiography, ultrasound, computed tomography).

In cases of severe general condition, preoperative preparation, including intensive infusion therapy aimed at correcting water-electrolyte balance, detoxification, and stabilizing vital organ and system functions, was carried out before the surgical intervention.

Surgical treatment of purulent-inflammatory foci was usually performed under intravenous anesthesia after appropriate premedication.

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During the surgery, a revision of the focus was performed to specify its localization, the extent of the lesion, and the degree of spread of the purulent-inflammatory process within the maxillofacial region.

Adequate drainage of the purulent cavity was ensured.

The **postoperative period** included comprehensive treatment, encompassing:

- Detoxification therapy.
- Anti-inflammatory therapy (using non-steroidal anti-inflammatory drugs and/or other medications).
- Desensitization therapy.
- Etiotropic antibacterial therapy (antibiotic selection was based on the sensitivity of the microflora isolated from the purulent focus, as well as the clinical picture and severity of the disease).
- Local treatment of the postoperative wound (including the use of antiseptic solutions, sorption dressings, and other means promoting cleansing and healing).

The treatment regimen was dynamically adjusted based on the results of daily patient observation, assessment of clinical dynamics, and data from control examinations.

Results and Discussion

Thus, the analysis of data for the 2023-2024 period in the Department of Maxillofacial Surgery at the Tashkent State Dental Institute showed that 750 patients aged 18 to 65 with various forms of purulent-inflammatory diseases of the maxillofacial region were receiving inpatient treatment.

- Among them, 350 (46.7%) patients were residents of Tashkent city.
- 400 (53.3%) patients were from rural areas.

A sustained trend towards an increase in the number of patients with various nosological forms of this pathology is noted.

The distribution of patients depending on the specific form of the purulent-inflammatory disease is presented in Table 1.

Table 1. Data on the distribution of patients with purulent-inflammatory processes of the maxillofacial region depending on the form of the disease and gender.

Clinical Form	Total Share in Structure (N=750), %	Distribution by Gender (of the total number in this row)	Distribution by year (of the total number in this row)
		Men, %	Women, %
Abscesses and Phlegmons	86,90%	59,40%	40,60%
Furuncle	4,50%	58,80%	41,20%
Carbuncle	5,50%	61,00%	39,00%
Lymphadenitis	3,10%	52,20%	47,80%
TOTAL	100,00%	59,20%	40,80%

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According to the data in Table 1, abscesses and phlegmons of the MFR were diagnosed in the main part of the patients (86.9%). Furthermore, 87% of the hospitalized patients were admitted for emergency indications. Abscesses and phlegmons were predominantly of odontogenic origin and had various localizations, involving one (123 people, 16.4%) or several (627 people, 83.6%) anatomical spaces.

The history revealed that the majority of patients—483 people (83.1%)—had sought help from a dentist in local polyclinics or private clinics a few days before hospitalization with complaints of intense tooth pain and had received treatment there. However, after a temporary improvement, the condition worsened after a few days, the pain began to increase, and swelling appeared.

- Meanwhile, 152 (16.9%) of the hospitalized patients noted that they had not previously sought a dentist even with painful sensations, resorting to self-treatment.
- It should be noted that 117 (77%) of these individuals were residents of rural areas.

The length of stay in the department ranged from 3 to 7 days, depending on the number of affected anatomical spaces, the patients' general somatic status, and the effectiveness of the treatment. In some cases, changes had to be made to the standard treatment regimen due to the patient's allergy or intolerance to any medication, as well as phenomena of antibiotic resistance of the pathogenic microflora.

During the monitoring period, 34 individuals with furuncle and 41 with carbuncle of the face were hospitalized in the department (according to Table 1).

- Among patients with furuncle (n=34), men predominated—20 (61.6%).
- Among patients with carbuncle (n=41), men predominated—25 (68.8%).

In terms of localization, furuncles and carbuncles were mainly noted on the upper lip, cheek, and chin regions.

The collection of history also noted cases of self-treatment by applying various compresses, ointments, lotions, and uncontrolled intake of antibiotics, as well as scratching and squeezing of purulent foci. All of this contributed to the spread of infection into the tissues and a deterioration of the patients' general condition. The treatment process in the department for these cases lasted an average of 3-7 days.

A direct correlation was found between the duration of hospitalization (bed-days) and factors such as the patient's general condition upon admission, the prevalence of the pathological process, and the presence of comorbidities, which is confirmed by the data in Table 2.

Table 2. Correlation between the form of purulent-inflammatory MFR disease and the duration of hospitalization.

Clinical Form	Total Number of Patients (n)	Distribution by Severity of Condition (of N), %	Average Duration of Hospitalization (bed-days)
		Satisfactory	Moderate Severity
Abscesses and Phlegmons (all forms)	652	10,00%	48,60%
Lymphadenitis	23	13,00%	87,00%
Carbuncle	41	0,00%	24,40%
Furuncle	34	32,40%	67,60%
TOTAL	750	10,50%	49,30%

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Conclusions

Monitoring of clinical data confirms the increase in the number of purulent-inflammatory diseases of the maxillofacial region, where abscesses and phlegmons of various localizations, predominantly of odontogenic etiology, occupy the leading place.

The main causes of the identified dynamic are: inadequate history collection and diagnostic errors at the outpatient stage, procrastination with the initiation of adequate treatment from the moment of disease manifestation, widespread self-treatment, as well as a rise in cases of allergy and the formation of antibiotic resistance as a consequence of the irrational use of medications. All of this dictates the need to review and improve current schemes of comprehensive therapy by introducing more effective local and systemic treatment methods.

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