



Experience in The Use of Antibiotics in The Treatment of Abscess Phlegmon of The Maxillofacial Area in Children

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Article History	Abstract
Received: 06 June 2023 Revised: 05 Sept 2023 Accepted: 12 Dec 2023	<i>Acute odontogenic inflammatory diseases in the maxillofacial region, affecting 55-65% of cases, present a pressing issue in surgical dentistry. Despite extensive research, treatment outcomes remain suboptimal, with environmental factors and microbial etiology contributing to the challenge. A study from 2021 to 2023 examined 55 pediatric patients hospitalized for these conditions, emphasizing early diagnosis and surgical interventions. The addition of Abasit syrup to traditional treatments showcased promising results. The research underscores the need for meticulous surgical procedures and innovative therapeutic approaches.</i>
CC License CC-BY-NC-SA 4.0	Keywords: <i>Surgical Odontogenic Inflammation, Pediatric Maxillofacial Surgery, Abasit Syrup Treatment</i>

1. Introduction

This scientific research is that acute odontogenic inflammatory diseases of the maxillofacial area represent an important medical problem in the clinical practice of surgical dentistry, given that the frequency of inflammatory processes in the maxillofacial area ranges from 55-65%, and in the structure of acute purulent-inflammatory diseases of the maxillofacial area reaches 69.5% and currently tends to increase their proportion. There is an aggressive course of the inflammatory process with damage to deep cellular spaces, accompanied by severe endogenous intoxication. Despite the large number of studies conducted in this area and the introduction of modern methods, the results of treatment of this category of patients do not improve significantly [9]. An increase in the number and severity of inflammatory diseases of the maxillofacial area and neck lead to an increase in temporary disability, and in some cases – disability and death. Most authors see the reasons for this situation in constantly deteriorating environmental conditions, a decrease in the standard of living of the population, which causes an increase in the number of patients with initially altered immune reactivity and the presence of background pathology [16,48]. The predominance of opportunistic and anaerobic microflora in the etiology also determines the characteristics of the course of odontogenic phlegmons [15,21]. The success of treatment of patients with acute purulent-inflammatory diseases largely depends on early diagnosis and objective assessment of the severity of the condition.

2. Materials And Methods

During 2021 – 2023 In the department of maxillofacial surgery of the Bukhara Regional Children's Multidisciplinary Medical Center, we examined 55 patients aged from 3 to 14 years who were hospitalized for acute purulent inflammatory diseases, of which 30 were boys and 25 were girls. Upon admission of all patients to the hospital, a detailed clinical examination was supplemented by microbiological and radiological examination if an odontogenic etiology of the disease was suspected. An orthopantomogram, a survey radiograph in lateral and direct projections, and a panoramic or targeted intraoral radiograph were performed. This allowed the diagnosis to be changed in many cases. With external signs of the inflammatory process only in soft tissues, changes in the bones are often revealed, indicating osteitis, chronic osteomyelitis, festering cyst, etc. Therefore, X-ray examination, at the slightest suspicion of the odontogenic nature of the disease, has become the rule in the clinic.

3. Results and Discussion

All patients with inflammatory processes in the maxillofacial area were admitted to the clinic for emergency reasons and, after diagnosis, received adequate comprehensive treatment in the first hours of hospitalization. The surgical method of treatment included a wide opening of the lesion, all pockets

and bruises, and, if possible, complete excision of necrotic tissue; effective drainage of a purulent focus; early closure of the wound in order to create favorable conditions for its healing. This principle remains unchanged even with the use of antibiotics and other modern drugs. Surgical drainage was performed as an emergency measure (removal of a tooth - the source of infection, intra- and extraoral incisions of the peri-maxillary soft tissues for abscesses and phlegmons, osteoperforation and intraosseous lavage of the inflammatory focus in odontogenic osteomyelitis, removal of sequestrers in chronic osteomyelitis).

The patients were divided into two groups: control and main. The control group included 25 patients treated in the traditional way: surgical treatment followed by intramuscular administration of the antibiotic cefazolin (1 gram 3 times a day every 8 hours), vitamin therapy to prevent dysbacteriosis, and frequent rinsing of the mouth with antiseptic solutions. Patients of the main group (30 patients), in parallel with the traditional treatment described above, on the second day after surgery, were prescribed the drug Abasit - syrup (1 time per day after meals for 5 days).

Distribution of patients with odontogenic purulent-inflammatory diseases depending on the causative tooth

Table No. 1

Causal tooth	Number of patients	%
Front teeth	15	thirty
Premolars	23	36.3
First and second molars	17	33.7
Total	55	100

Table No. 2 Distribution of patients by localization of purulent process

Localization area	Number of patients	%
Unicellular space	23	41.8
Two anatomical regions	17	31
Three or more anatomical regions	15	27.2
Total:	55	100

Table 4 shows data on the types of microorganisms on which the drug Abasit has a bactericidal effect.

Table No. 3 Types of betas- lactamases and their sensitivity to inhibition by clavulanic acid

No.	Type of beta- lactamases	Microorganism	Inhibition by clavulanic acid
1	Transfer on plasmids	<i>Escherichia coli</i>	+
		<i>Pseudomonas aeruginosa</i>	+
		<i>Haemophilus influenzae</i>	+
		<i>Klebsiella pneumoniae</i>	+
		<i>Staphylococcus aureus</i>	+
2	Chromosome transfer: Penicillinase	<i>Proteus mirabilis</i>	+
3	Chromosome transfer: cephalosporinases	<i>Pseudomonas aeruginosa</i>	-
		<i>Enterobacter cloacae</i>	-
		<i>Morganella morganii</i>	-
		<i>Bacteroides fragilis</i>	+
4	Transfer on chromosomes: wide range	<i>Klebsiella pneumoniae</i>	+
		<i>Branhamella catarrhalis</i>	+

Based on the results of previous studies and experience in treating patients, strains of microorganisms resistant to amoxicillin were identified. Having studied the spectrum of action of the drug Klamoks, it was decided to change the antibacterial drug in order to obtain better clinical and laboratory indicators for the complex treatment of inflammatory diseases of the face. During surgical treatment, access to purulent foci was both intraoral, extraoral, and combined, that is, with the creation of counter-apertures. In case of existing inflammatory contracture of the masticatory muscles, when intraoral access to the purulent focus is impossible, we resorted to extraoral methods of surgical intervention.

4. Conclusion

To assess the radicality of surgical intervention in patients with phlegmon of the face and neck, the main criteria were:

- guaranteed elimination of the primary odontogenic source of infection;
- the use of such approaches that ensured the inspection of all cellular spaces of the face and neck involved in the inflammatory process, guaranteed the absence of unopened purulent foci;
- the choice of access for surgical intervention should ensure not only maximum wound opening, but also the possibility of full treatment with staged necrotomies, adequate wound dialysis and the use of the necessary local therapy, taking into account the phases of the wound process;
- wide and multiple incisions should not be associated with fears of the formation of significant tissue defects.

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