

## CLINICAL AND EPIDEMIOLOGICAL CHARACTERISTICS OF ODONTOGENIC PURULENT-INFLAMMATORY DISEASES IN CHILDREN

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**Abstract.** Odontogenic purulent-inflammatory diseases in children remain highly relevant due to their prevalence and risk of complications. This study analyzed 239 patients aged 3–17 years, considering age, gender, and premorbid background. The highest incidence was observed in adolescents (12–17 years), with a predominance of males. Premorbid conditions, particularly chronic tonsillitis, anemia, and ethmoiditis, were common and often combined. Submandibular and infraorbital phlegmons were the most frequent clinical forms. The findings emphasize the importance of early diagnosis and individualized treatment approaches in pediatric patients.

**Keywords.** Odontogenic infection, purulent-inflammatory diseases, children, phlegmon, premorbid background, comorbidity, maxillofacial region

**Relevance.** Odontogenic purulent-inflammatory diseases in children remain a significant problem in modern pediatric dentistry and maxillofacial surgery due to their high prevalence, rapid progression, and risk of severe complications. The course of these diseases is influenced by age-related anatomical and physiological characteristics, as well as by the presence of premorbid conditions. However, the clinical structure, distribution patterns, and the role of comorbid background in the development of odontogenic infections in children are still insufficiently studied.

**Aim.** To analyze the clinical and demographic characteristics of odontogenic purulent-inflammatory diseases in children, considering age, gender, and premorbid background.

**Materials and methods.** The study included 239 children aged 3 to 17 years diagnosed with odontogenic purulent-inflammatory diseases who were treated in the maxillofacial surgery department between 2021 and 2025. Additionally, 39 patients without premorbid pathology were included as a comparison group.

Patients were divided into three groups:

Group I (n=105) — patients with odontogenic infection complicated by phlegmon on a premorbid background, treated with a comprehensive approach including bacteriophage therapy and sea buckthorn oil;

Group II (n=95) — patients with premorbid background receiving conventional treatment;

Group III (n=39) — patients without premorbid pathology receiving standard therapy.

Clinical, demographic, and statistical analyses were performed.

**Results.** Odontogenic purulent-inflammatory diseases were most frequently observed in children aged 12–17 years (42.3%), followed by 7–11 years (34.7%) and 3–6 years (23.0%). A slight predominance of male patients was noted in the main (57.1%) and control (55.7%) groups, while females predominated in the comparison group (53.8%).

The analysis of comorbid conditions showed a high prevalence of premorbid pathology, with the most common conditions being chronic tonsillitis (15.5%), anemia (15.5%), and ethmoiditis (11.0%). In total, comorbidities exceeded 100%, indicating the presence of multiple concurrent conditions in many patients.

Among clinical forms, submandibular phlegmon (30.5%) and infraorbital phlegmon (24.3%) were the most common, together accounting for more than half of all cases.

**Conclusion.** Odontogenic purulent-inflammatory diseases in children are characterized by a predominance in older age groups, a high frequency of premorbid conditions, and a leading role of submandibular and infraorbital phlegmons. These findings emphasize the importance of early diagnosis and individualized treatment strategies considering systemic factors.

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