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ENHANCEMENT OF THERAPEUTIC STRATEGIES AND PREVENTION OF COMPLICATIONS IN PEDIATRIC MAXILLOFACIAL ABSCESSES AND PHLEGMONS

Ilkhom Ibrokhimovich Akhmedov
Bukhara State Medical Institute, Bukhara, Uzbekistan

Feruza Rakhmatillaevna Kamolova
Bukhara State Medical Institute, Bukhara, Uzbekistan

Abstract:
Purulent-inflammatory lesions such as abscesses and phlegmons in the maxillofacial area represent serious clinical conditions in pediatric patients. Due to specific anatomical and immunological features in children, these infections can progress rapidly and result in life-threatening complications if not managed promptly. This research investigates optimized diagnostic and treatment approaches aimed at improving clinical outcomes for children affected by such conditions. The study also evaluates preventive measures designed to mitigate the risk of associated complications. Drawing upon clinical data, comprehensive treatment algorithms were established—integrating conservative therapy, surgical intervention, and postoperative support. The results highlight the necessity for early diagnosis, interdisciplinary cooperation, and tailored therapeutic plans to ensure optimal patient care.

Keywords: Pediatrics, Facial abscess, Soft tissue infection, Maxillofacial region, Complication prevention, Surgical management, Pediatric inflammation, Oral health, Treatment protocol

Materials and Methods:
The study was carried out in a pediatric department specializing in maxillofacial surgery and included 330 patients aged between 3 and 14 years who were diagnosed with facial and oral abscesses or phlegmons. The clinical assessment was supplemented by laboratory investigations, ultrasonography, and contrast-enhanced

computed tomography (CT) scans when needed. Therapeutic management encompassed empirical and targeted antibiotic regimens, surgical drainage techniques, and adjunctive care, including rehydration therapy and immune modulation. Patients were closely monitored for potential complications such as cellulitis, bone infection (osteomyelitis), and systemic inflammatory responses (sepsis). Statistical analysis was applied to measure the effectiveness of the updated therapeutic protocols.

Conclusion

The research findings confirm that prompt recognition and timely application of integrated therapeutic measures markedly lower the likelihood of complications in children with maxillofacial abscesses and phlegmons. The implementation of standardized clinical protocols, blending both pharmacological and surgical treatment, was associated with accelerated healing and reduced relapse rates. Moreover, educational initiatives on oral hygiene and routine dental evaluations contributed significantly to the prevention of recurrent infections. The proposed model demonstrates practical value and can be considered for broader application in pediatric surgical practice.

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