



# THE EFFECT OF A COMPREHENSIVE THERAPEUTIC AND PREVENTIVE APPROACH ON ORAL HYGIENE STATUS AND SALIVATION IN CHILDREN WITH DENTAL EROSION ASSOCIATED WITH GERD

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## KEYWORDS

*To evaluate the effect of a comprehensive therapeutic and preventive approach on oral hygiene indices and the rate of unstimulated salivation in children with dental erosion associated with GERD*

## ABSTRACT

*The relevance of the problem of erosive lesions of hard dental tissues in children with gastroesophageal reflux disease (GERD) is обусловлена высокой распространенностью acid-induced enamel changes, the progressive nature of lesions, and the complexity of prevention under conditions of constant exposure to endogenous acids. Disturbances in the acid–base balance of the oral cavity, decreased salivary flow rate, and poor oral hygiene create favorable conditions for enamel demineralization and reduced resistance. In this regard, the development and clinical evaluation of comprehensive therapeutic and preventive measures aimed at normalizing local oral homeostasis in children with GERD are of particular importance..*

**Relevance.** The relevance of the problem of erosive lesions of hard dental tissues in children with gastroesophageal reflux disease (GERD) is обусловлена высокой распространенностью acid-induced enamel changes, the progressive nature of lesions, and the complexity of prevention under conditions of constant exposure to endogenous acids. Disturbances in the acid–base balance of the oral cavity, decreased salivary flow rate, and poor oral hygiene create favorable conditions for enamel demineralization and reduced resistance. In this regard, the development and clinical evaluation of comprehensive therapeutic and preventive measures aimed at normalizing local oral homeostasis in children with GERD are of particular importance.

**Aim of the study.** To evaluate the effect of a comprehensive therapeutic and preventive approach on oral hygiene indices and the rate of unstimulated salivation in children with dental erosion associated with GERD.

**Materials and methods.** The study included 120 children diagnosed with GERD and erosive lesions of hard dental tissues. Depending on the treatment strategy, patients were divided into groups receiving traditional treatment and comprehensive treatment. The comprehensive approach included individualized oral hygiene correction, normalization of drinking and dietary regimens, stimulation of salivation, remineralization therapy, and prevention of acid exposure. The effectiveness was assessed based on the dynamics of the

Silness–Löe hygiene index and the rate of unstimulated salivation before and after a one-month course of interventions.

**Results.** The results showed that children who received comprehensive treatment demonstrated a statistically significant improvement in oral hygiene status. The mean Silness–Löe index decreased from  $1.70 \pm 0.04$  to  $1.02 \pm 0.02$  points, corresponding to a 2.6-fold reduction compared to baseline. This effect was significantly greater than in the traditional treatment group, where the reduction was less pronounced. The substantial improvement in hygiene status is explained by the individualized hygiene training, supervised procedures, and increased patient motivation.

Analysis of unstimulated salivary flow rate revealed a significant increase in the comprehensive treatment group—from  $0.34 \pm 0.14$  to  $0.42 \pm 0.02$  ml/min ( $p < 0.001$ ), while changes in the comparison group were minimal. The increase in salivary secretion is associated with correction of drinking and dietary habits and the use of salivation-stimulating methods, including elements of autogenic training.

**Conclusion.** The comprehensive therapeutic and preventive approach in children with dental erosion associated with GERD provides a significant improvement in oral hygiene status and contributes to an increase in unstimulated salivary flow rate. These changes are key factors in normalizing local oral homeostasis and reducing the risk of further progression of erosive lesions of hard dental tissues.

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