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CARIES-PREVENTIVE EFFECT OF *LACTOBACILLUS REUTERI* IN CHILDREN WITH GASTROINTESTINAL PATHOLOGY

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Introduction: Gastrointestinal diseases are the most common pathology compared with other diseases of the organs and systems in children; their incidence is 140 per 1000 children [1-4]. With such a somatic pathology, the risk of tooth caries is rather high. Thus, in patients with chronic gastroduodenitis, the prevalence of caries is 97%, and its intensity makes $5,80 \pm 0,54$ [5]. Gastroesophageal reflux (GER) is one of the most frequent manifestations of motor disorders of the upper gastrointestinal tract. In 25% of cases, it accompanies and complicates digestive disorders in children [6]. Acid reflux at the oral cavity level can cause various pathological conditions leading to deterioration in the quality of life of these patients. They include erosion and caries of the hard tissues of the teeth, dryness in the mouth, burning sensation of the oral mucosa, erythema of the mucous membrane of the palate and uvula, halitosis [7].

The choice of the drug for local prevention and treatment of the pathology of hard tooth tissues in children against a background of gastrointestinal diseases is an urgent problem that is determined by compatibility of the drugs used to treat the underlying disease and caries and results in improvement in the quality of life of the patient. At present, a promising direction in dentistry is the use of probiotics in prevention and treatment of the oral cavity diseases, in particular tooth decay. This is determined by the fact that they are representatives of the normal microflora of the oral cavity, thus, do not initiate a carious process, but create an uncomfortable local environment for pathogens development [8-10].

Purpose of the study. To determine the effectiveness of pastilles containing *Lactobacillus Reuteri* in the prevention and treatment of dental caries in children with gastrointestinal diseases.

Methods of research. The study involved 16 children, aged 10-15 years,

who were registered with a gastroenterologist for gastroesophageal reflux disease (GERD). The clinical examination included assessment of the intensity of tooth and surface involvement by caries (indices DMFT and DMFS, where D - decayed, M - missing, F - filled, T - tooth decay and S - caries surfaces).

The children were divided into 2 groups: basic (B) and controls (C). The treatment in the controls consisted of professional teeth cleaning, oral cavity sanitation, and individual hygiene. In addition to the above therapy, the children of the basic group were administered with pastilles containing *Lactobacillus Reuteri*, 1 - 2 pastilles for dissolving in the mouth after brushing the teeth. The drug reduces the number of bacteria that cause caries (*Streptococcus mutans*); selectively inhibits periodontal-associated bacteria (*Porphyromonas gingivalis*, *Fusobacterium nucleatum*, *Prevotella intermedia*, *Aggregatibacter actinomycetemcomitans*), reduces the plaque formation.

Statistical processing of the obtained data was carried out with the help of STATISTICA (StatSoft Inc. 1984 - 2011) software.

Results. The intensity of caries in the examined children was DMFT = $11 \pm 0,65$, DMFS = $14 \pm 0,65$, the difference between the controls and the basic group was statistically insignificant.

The carious process in the examined persons proceeded with the involvement of almost all teeth, including the immune zones. Such caries involvement of all functionally oriented groups of teeth indicated a very low level of resistance of hard tooth tissues.

Intensity of caries in the controls a year after the treatment and preventive measures (according to DMFT index) increased ($12,57 \pm 0,65$), while caries increase was $1,29 \pm 0,61$. In the basic group, increase in this indicator ($11,56 \pm 0,62$) was also observed, but the difference was not statistically significant, and intensity gain was only $0,22 \pm 0,35$. DMFS indices were somewhat better; despite the increase of this index in both groups, the difference was not statistically significant (C - $14,71 \pm 0,98$ and B - $14,22 \pm 0,74$). The increase in intensity according to DMFS in the controls was $0,85 \pm 0,48$, in the basic group - $0,22 \pm 0,44$, and this difference was statistically significant ($p < 0,05$).

Thus, introduction to the complex of therapeutic and preventive of pastilles containing *Lactobacillus Reuteri* results in deceleration in the in-

crease in caries intensity according to both DMFT and DMFS, which makes it possible to talk about the prospects of the chosen tactics of managing patients with tooth decay against a background of the gastrointestinal tract pathology.

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