

CORRECTION OF OXIDATIVE STRESS IN THE ORAL CAVITY TISSUES BY MULTIPROBIOTICS IN CASE OF PROLONGED HYPOACIDITY

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INTRODUCTION. Recently, many studies are conducted for identifying the relationship between long-term use of proton pump inhibitors and the development of pathological changes in various systems and organs. It is known that prolonged reduction of gastric secretion leads to hypoacidity, hypergastrinemia (Olbe L., 1989) and to the development of pathological changes in the digestive organs (Berehova T.V., 2012). Extremely important is to find ways of correcting these undesirable effects. Use of probiotics not only corrects the violation of gastrointestinal tract microecology, but also positively affects to the activity of the immune and endocrine systems.

The aim of the study was to prove the feasibility of multiprobitotics using for prevention of oxidative stress development in mouth organs and tissues at long hypoacidity.

MATERIAL AND METHODS. Experiments were carried out on 42 rats- males of "Wistar" line, weight 180-250g. Experimental rats for 28 days were administered intraperitoneally omeprazole (14 mg/kg, "Sigma", USA), "Symbiter" or "Apibact" (per os 0,14 ml / kg, O.D. "Prolisok", Ukraine) separately and in combination. "Symbiter acidophilic" is a mutualistic symbiosis of 14 strains of probiotic bacteria with high concentrations of viable cells. Development of hypergastrinaemia was determined by gastrin concentration in the blood plasma of rats (it was increased 2,9 times after omeprazole administration for 28 days). In homogenate of soft periodontal tissues and salivary glands were determined the content of oxidation-modified proteins (OMP) (E. Dubinin, 2008) and middle mass molecules (MMM) (Gabrielyan N.I., 1983).

RESULTS. At long hypoacidity in periodontal tissues and salivary glands the content of OMP and MMM compared with control animals are significantly increased, indicating the development of oxidative stress. During correction of oxidative stress by probiotics in soft periodontal tissues and salivary glands content of OMP and MMM more efficiently were reduced by "Apibact" application.

CONCLUSIONS. Consequently, usage of multiprobitotics under long hypoacidity suppresses the development of oxidative stress in periodontal tissues and salivary glands.