Influence of multiprobiotic on concentration of Collagen and Non-Collagen protein monomers in rat's parodont during continuous hypoacidosis

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The aim of the research was to study the influence of the multiprobiotic "Symbiter forte omega" on pathological changes in soft tissues of rats' periodontal tissues under the conditions of prolonged use of omeprazole. Experiments were performed on 46 white male rats weighing 180-250 g. The animals were divided into 3 groups: I - control, 0.2 ml of water for injection intraperitoneally was administered to rats daily for 28 days; II - rats that received omeprazole daily (during 28 days) (14 mg / kg body weight intraperitoneally); III - omeprazole (14 mg / kg body weight intraperitoneally) in combination with "Symbiter forte omega" (0.14 ml / kg body weight orally) was administered. Animals were sacrificed under urethane anesthesia (50 mg / kg body weight intraperitoneally) by bloodletting. The object of the study was soft periodontal tissues, in which the content of free oxyproline (Tetyanets S.S., 1985), fucose (Sharaev PN, 1997) and glycosaminoglycans (GAG) (Sharaev PN, 1987) was determined. The content of oxyproline in soft periodontal tissues after 28-day omeprazole administration increased in 1.87 times (P <0.05) when compared with control. Content of oxyproline in soft periodontal tissues of rats which recieved multiprobiotic "Symbiter forte omega" showed a decrease in comparison with animals without correction in 1.49 times (P <0.05). We estimated that the content of GAG in soft periodontal tissues of rats under conditions of long hypoacidity on 28 day of the administration of omeprazole increased in 1.37 times (P <0.05) when compared to control group. The use of the multiprobiotic "Symbiter forte omega" during 28 days on the background of omeprazole-induced hypoacidity contributed to reduction in GAG content in 1.89 times (P <0.05) in soft periodontal tissues of rats when compared with non-corrected animal group. Investigating the content of free fucose in soft periodontal tissues under conditions of omeprazole-induced hypoacidity, the following results were obtained: the multiprobiotic "Symbiter forte omega" reduced the content of fucose in periodontal tissues in 1.61 times (P<0.05) in comparison with the control group and in 1.12 times (P <0.05) when compared to the rats without correction. Thus, in conditions of prolonged omeprazole-induced hypoacidity, there is an increased catabolism of collagen and non-collagen proteins in rats' periodontal tissues. Multiprobiotic "Symbiter forte omega" protects against depolymerization of collagen and non-collagen structures of periodontal connective tissue under conditions of long hypoacidity.

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