Название: Influence of biologically active substances from Kombucha (Medusomyces gisevii) on rat gut microbiota with experimental antibiotic-associated dysbiosis

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Аннотация: The present study was conducted to evaluate the effect of biologically active substances from Medusomyces gisevii zoogloea (MG zoogloeas) on intestine microbiocenosis of white rats during the experimental antibiotic-associated dysbiosis. The intestinal dysbiosis of rats was induced by gentamicin sulfate in dose of 10 mg/rat twice a day for 10 days for all the rats. Animals in the control group received a standard diet recommended by the Institute of Nutrition, the animals of the experimental group received 120 mg of active substance of MG zoogloea/rat every day during the experiment, in addition to the usual diet. After the termination of the oral administration of gentamicin the animals of the second sub-group (experimental 2) received 120 mg of active substance of MG zoogloea every day during the experiment, in addition to the basic diet.

The animals in the control group showed a dysbiosis symptoms, observed a significant decrease in the total bacterial counts, as well as the decrease of Bifidobacterium spp, Lactobacillus spp, Escherichia coli level starting from the fourth until 10th day of the experiment, the number of Candida spp. increased. Animals of the experimental group avoided the symptoms of dysbiosis, reduce of the test groups of bacteria occurred only on the eighth day, and Candida level did not rise. After discontinuation of gentamicin administration rats treated with MG showed rapid disappearance of dysbiosis symptoms, the number of microflora started to improve significantly already in the fourth day, while the control sub-group animals showed small increase occurred only on the eighth day. Results indicated that using biologically active substances from Medusomyces gisevii zoogloea has positive effects on intestine microbiocenosis of rats during the experimental antibiotic-associated dysbiosis.

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