

ABSTRACT

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Effects of humic substances on the experimentally injured gastrointestinal tract in rats.

Diploma work

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Study programme: Special worker in laboratory methods

Background: The aim of those diploma work was find out what effects have humic substances on experimentally injured gastrointestinal tract by cytostatic, 5-fluorouracil, in rats.

Methods: The experiment proceeded five days and it was used twenty-four rats of Wistar breed. They were divided into four groups (E, F, G, H). Every group contained six individuals. The second and the fourth day animals were located into the metabolism cages. We administered sense solution of LAMA test (LAMA solution) them. LAMA test is test of intestinal permeability. It is measured concentrations of sugars (lactulosa, manitol, sucralosa, xylosa) excreted by urine for five hours. The third day was handed to 5-fluorouracil to the animals. Throughout experiment groups had access to drinkable water, just with difference, that the groups E and G had water without admixture, groups F and H had water with admixture of humic substances. The fifth day animals were euthanized by ethereal narcosis and removed them samples of tissue from small intestine. We were processed the samples and observed under the light microscope.

Results: We analyzed the urine on the gas chromatograph. We processed the results by the help of statistical programme and located them to the tables. The results of LAMA test didn't demonstrated us protective effect. The histological preparations of all groups were almost coincident with physiological constitution of small intestine's wall. Only subjectively estimative difference was lower infiltration of leucocytes in the

villus. Lower infiltration was observed at preparations of groups (F, H), that they had access to water with humic substances.

Conclusions: Humic substances are omnipresent. They were used for its curative effects in the old days. To verify these effects on the experimentally injured gastrointestinal tract will be need yet much studies.