HERPETICAL INFECTION IN MICE AND PROTECTIVE ACTIVITY THE COMPOSITION OF LACTOBACTERIA

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Disease caused by herpes simplex virus type 1 (HSV-1) are very widely spread and are poorly controlled. Latent character and duration persistence of herpes virus infection leads ordinary to reduce of non-specific organism protection.

Lactobacteria depending on the type are capable to increase an organism protective reactions with the help of interferon endogenic induction.

The purpose of the work was to investigate antiherpetic composition which contain cells alive of *Lactobacillus*: L. delbrueckii subsp. bulgaricus LB86 ВКПМ-В-5788, L. delbrueckii subsp.delbrueckii DSM20074, L. rhamnosus LB3 1MB B-7038, L. acidophilus, L. rhamnosus V® at mice experimental herpetic meningo-encephalitis.

The intralabially BALB/c mice infection by HSV-1 (N=100) in dose 100 LD_{50}/0.025 ml (titer of 5 lg LD_{50}) has been accompanied by 100 % mortality during 6 days. The composition of lactobacteria has been introduced in mice on 0.5 ml *per os* during 6 days every day according to the scheme: before infection – the prophylaxis scheme and after 24 hours after virus herpes infection – the treatment scheme. The use of every scheme included three groups of animals. The first and second group, every day *per os,* during 6 days, had obtained the lactobacteria composition according to $1.0*10^9$ bacteria/mouse and $1.0*10^5$ bacteria/mouse. Control infected animals obtained 0.15 M NaCl.

It has been established that introducing of lactobacteria composition according to the prophylaxis scheme led to animals mortality decrease. The optimal dose was the dose $1.0*10^9$ bacteria/mouse, because multiple of animals mortality reduce (MR) in the experimental group consisted of 2.0 in comparison with control for lactobacteria composition. Index of effectiveness (IE) of the composition in the dose of $1.0*10^9$ bacteria/mouse, that has been determined by the formula (MR-1/MR*100), was 50. At lactobacteria composition use with treatment purpose in the optimal dose MR was 1.5, but IE was 33.3 that testifies about medical properties, because IE-30 and more are an index of antiherpetic activity of the preparation *in vivo*. Thus, six days course of lactobacteria composition permitted to prevent animals mortality on 20 % due to the prophylaxis and treatment scheme use according on 33 %.

The protective activity of the lactobacteria composition under herpetic meningo-encephalitis connected with endogenic interferon stimulation during the whole terms of observation was 6 days. Thus, introducing of lactobacteria composition permitted to increase mice splenocytes activity, so they induced more interferon –α and –γ *in vitro* in response to an adequate induction.

Thus, is has been revealed the significant efficacy of lactobacteria composition use on the model of mice herpetic meningo-encephalitis, which was stipulated activation by the system of interferon control animals.