
Abstract

Evaluation of the effectiveness of different immunostimulatory medicine at the experimental trichinosis and leishmaniosis on white mice

Zhdanova, O.B.^{1,2*}; Rudneva, O.V.¹; Akulinina, J.K.³; Napisanova, L.A.¹

1 – All-Russian Scientific Research Institute of Fundamental and Applied Parasitology of Animals and plants (Federal State Budget Scientific Institution) - All-Russian Scientific Research Institute of Experimental Veterinary Medicine K.I.Skryabin and Y.R. Kovalenko the Russian Academy of Sciences.

2 – Kirov State Medical University

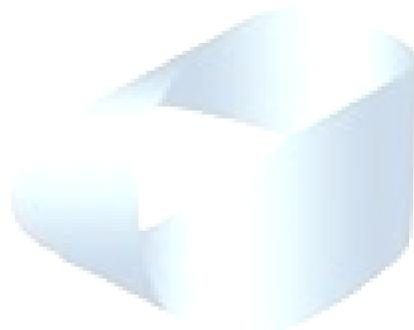
3 – Moscow State Medical University named after Sechenov

*Correspondence author: olgazhdanova70@gmail.com

Background Immunostimulatory drugs in recent years are widely used in Parasitology. Also, homeopathic drugs such as Cina have anti-helminthic and immunostimulation properties. We studied the possibility of using immunostimulating and high dilutions drugs during parasitological disease treatment. Two experimental parasitological disease models (trichinelosis and cutaneous leishmaniosis) were used. **Trichinellosis** caused by gastrointestinal nematode *Trichinella spiralis* occurs in humans, domestic and wild animals. **Leishmaniasis** is a disease caused by parasites of *Leishmania* genus. It is spread by certain sandflies types bite. The disease can present in three main ways. We used 2 leishmania *in vitro* models and experimental mice cutaneous model. The cutaneous form presents skin ulcers, while the mucocutaneous form presents skin, mouth, and nose ulcers. For estimation of immunostimulatory efficacy, size of leishmanioma, presence of leishmania in the ulcer, and treatment time were analyzed. **Aims** This study aimed at to assess the protective efficiency of homeopathic drug such as Cina C6cH and interferon 2 and inducers of interferons of types 1 and 2 interferon, against experimental trichinosis and leishmaniosis. **Methodology** An assay was carried out on 50 white outbred mice. These were divided into three groups of ten mice each. Group 1 was injected with interferon inducers (2.16 mg/mouse in 0.2 ml sterile saline, intramuscularly); group 2 - desoldering dissolved in water Cina C6cH one time a day per os. The group 3 received interferone-a2b; and the group 4 was injected 0.2 ml of sterile 0.9% NaCl. The group 5 was only for leishmaniasis. **Results and discussion** After a 48 hours regimen, the groups 1-3 were inoculated with a dose of 80 ± 5 units of *T. spiralis* larva per mouse. After 90 days of trichinellosis incubation, and during one year of leishmaniasis process the mice were euthanized and dissected for evaluation. Maximum protection was obtained in mice immunized with interferon-a2b and its stimulatory, as *T. spiralis* detected larvae in animals was 733.5 ± 25.1 larva/animal. Cina C6cH immunized group presented 2840.5 ± 183.3 larva/animal. This was less than control group (4485 ± 430.6 larva/mouse). Also mice with leishmaniasis had fewer ulcers during treatment with immune stimulating. Ulcers sizes were 0.46 ± 0.05 (group 3); 2.2 ± 0.5 (group 2), and 3.2 ± 0.8 (group 5). Leishmanial amount in the ulcer was 3.1 ± 0.7 (group 3), 3.6 ± 0.4 (group 2), and 3.7 ± 0.3 (group 5). The time of the treatment in the 3-d group was 19.2 ± 0.9 and more than 40 days in all group (2,4,5). **Conclusion** So, based on this, we consider it advantageous to continue the study of immunostimulatory drugs in the complex treatment of trichinellosis and leishmaniosis.

Keywords: immunostimulatory, trichinellosis, leishmaniosis





IJHDR

© International Journal of High Dilution Research.
Not for commercial purposes.

