Original Article

Evaluation of the protective activity of different immunostimulatory drugs at the experimental trichinosis on white mice.

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Abstract

Background: Trichinellosis caused by the gastrointestinal nematode *Trichinella spiralis* occurs in humans, domestic animals and wild animals. The immunostimulatory and homeopathic drugs in recent years are widely used for helminthiasis in veterinary medicine.

Aim: The purpose of this study was assess the protective efficiency of homeopathic drug such as Cina C6cH and meglumineacridonacetate(cycloferon) against experimental trichinosis, that can affect the muscle phase of the parasite *T. spiralis* in mice.

Methods: An assay was carried out on 30 white outbred mice. These were divided into 3 groups of 10 mice each. The group 1 was injected with the cycloferon (intramuscularly in the dose of 2.16 mg/mouse in 0,2 ml sterile saline); the group 2 - desoldering dissolved in water Cina C6cH (once a day during 10 days). The group 3 received 0.2 ml of sterile 0.9% NaCl. The drugs were injected twice with an interval of 48 hours. After a 48 hours regimen the groups were inoculated with a dose of 80 ± 5 units of *T. spiralis* larva per mouse. After 90 days of incubation, the mice were euthanized and dissected for evaluation. Student's t-distribution was applied.

Results and Conclusion: The maximum protection was obtained in mice immunized with cycloferon, the number of *T. spiralis* larvae detected in animals was 733.5 ± 25.1 larva/per animal. The number of larvae detected in the group immunized by Cina C6cH was 2840.5 ± 183.3 . This was 6.1 and 1.6 times less than in the mice of control group (4485 ± 430.6 larvae/mouse). There was the comparison of the crystalloscopic based on the investigation of biological objects crystallogenic properties, pictures received from the animals receiving an immunomodulator, control group and intact mice. The result of drying drops of urine of the mice infected with *T. spiralis* considerably differs from the facias received from healthy animals. In particular, the greatest variations are registered by us in the analysis of a single and crystal component concerning which both high-quality, and quantitative shifts are observed. So, at free crystallization of the studied biosubstrate the "rectangles" which by the chemical nature are cholesterol and its derivatives, which are absent in the facias of healthy mice accurately come to light. Quantitative distinctions at the animals having trichinosis are noted on occurrence of crystal figures like "pyramid" that phosphate-anions can demonstrate increase in allocation at them. On the other hand, the number of amorphous bodies significantly decreases under review at preservation of their size and type of interactions with large crystals. And presence at an organism of an animal of immunomodulator significantly transforms result of a free crystallogenes of the considered biological media towards a crystalloscopic picture

of a healthy animal (intact mice). So the use of homeopathic drugs also reduces in the number of infective *T. spiralis* larvae in mice and has a synergistic effect on the treatment.

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