



STUDY OF THE LOCAL IRRITATING AND ALLERGENIC EFFECTS OF THE “HELMINTH-ART” CAPSULE

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Abstract

This research work is devoted to the study of the local irritating and allergenic effects of the “Helminth-ART” capsule. According to the results of the study, “Helminth-ART” capsules in the studied doses do not have a locally irritating and allergenic effect.

Keywords: Capsule, rabbits, guinea pigs, clinical condition, physiological condition, local irritant, allergenic effect

Introduction

Relevance of the topic

When developing new drugs, the need to conduct a comprehensive pre-clinical examination of them is important [1,2]. When developing combined drugs against new types of helminths, it is necessary to comprehensively evaluate these drugs for their toxicological, cumulative, local irritating and allergenic effects so that they do not adversely affect the animal and human body [3-6]. In studies, a capsule drug form “Helminth-ART” was developed based on a mixture of dry extracts from medicinal plant raw materials against helminths [7]. Its qualitative and quantitative analysis, as well as studies on the development of a “solubility” test, analyzed the biological effectiveness of the drug in vitro [8]. Research has been done on acute toxicity and microbiological purity. And positive results are achieved. At the same time, during the research work, its local irritating and allergenic effects were studied.

The purpose of the work. The study of the local irritating and allergenic effects of the “Helminth-ART” capsule is the goal of the study.

Part of the experiment. Materials and methods. The local irritating effect of the capsule “Helminth-ART” - an aqueous solution of the drug “Helminth-ART” - was assessed as having a local irritating effect on the mucous membrane of the eye. The experiment was carried out in rabbits of both sexes with healthy eyes and pre - observed, weighing 2.2-2.5 kg. A 1% aqueous solution of 0.1 ml of the “Helminth-ART” capsule was poured into the right eye of rabbits. To the left eye, a 0.1 ml 0.9% NaCl



solution was dripped and served for control. Both eyes of the animal were examined 1, 24 and 72 hours after the above exposure. The condition of the rainbow curtain of the eye, conjunctiva was assessed by the condition of the mucous membrane, the condition of blood vessels, the presence or absence of tears.

The allergenic properties of the aqueous solution of the capsule “Helminth-ART” were studied by the method of “conjunctival testing” in 12 guinea pigs weighing 300-350 grams. The conjunctive test is a very sensitive test that, in some cases, allows you to determine the reaction of animals to an allergen with weak allergens and negative skin tests. To study the sensitive characteristics of guinea pigs, they were divided into 2 groups of 6 heads each. An aqueous solution of the capsule “Helminth-ART” was sent to guinea pigs once a day for 20 days in the stomach at a rate of 1.0 ML. Testing of the properties of sensitization was carried out on the 10th day; on the 15th and 20th, when the introduction of an aqueous solution of the capsule “Helminth-ART” began. To carry out experiments, 2 drops of the test drug were sent to guinea pigs with an eye pipette under the upper eyelid, 1 drop of distilled water was sent to the other eye (control). After instillation, the eyelids were combined and held in this position for 1 second. Both eyes of animals instilled once with an aqueous solution of the drug were examined 15 minutes later (rapid reaction), 1 hour, 24, 48 and 72 hours after exposure (delayed-type hypersensitivity) [9-11].

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Results discussion

The results of studies showed that an aqueous solution of the “Helminth-ART” capsule caused a slight tear in rabbits after 15 minutes, and after 1 hour; 24 hours; 48 hours and 72 hours, during these times there were no signs of local irritating characteristic of the eye mucosa in the form of hyperemia, swelling, sclera and changes in the cornea. The width of the eyelid has also not changed, which indicates that the drug does not have a local irritating effect on the mucous membrane of the eyes. On the 10th; 15th and 20th days of research to determine the allergenic effect of the “Helminth-ART” capsule, the following manifestations were observed in animal sensitivity: after an aqueous solution of the “Helminth-ART” capsule was introduced into the conjunctiva, guinea pigs did not open their right eyes for some time. When examining the eyes of guinea pigs, there were no visible changes (tumors, redness) in the state of the tear duct for 15 minutes, 1 hour; 24 hours, 48 hours and 72 hours, that is, the drug does not have sensitive properties.

Conclusion

The “Helminth-ART” capsule had no local irritating effect when applied to the rabbit's eye conjunctiva. Also, an aqueous solution of the capsule “Helminth-ART” did not have an allergic effect when administered to guinea pigs daily for 20 days. The “Helminth-ART” capsule does not have local irritating and allergenic effects in the studied doses.

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