

STUDIES ON THE DETERMINATION OF THE CUMULATIVE PROPERTIES OF THE DRY EXTRACT "HELMINTH-ART"

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Abstract: The object of this study was the dry extract of "Helminth-ART". The cumulative properties of the anthelmintic dry extract "Helminth-ART" were studied in an experiment on mice. It was also found that it does not have cumulative properties.

Keywords: helminths, dry extract, cumulative properties, mice



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Introduction

A new drug should not have a negative effect on the body of animals and humans, not cause anomalies and not have a teratogenic effect [1]. In this research work, the study of the cumulative properties of a dry extract with an anti-helminth effect is determined. "Helminth-ART" consists of a mixture of dry extracts isolated separately from anthelmintic plant materials, such as the aerial part of the wormwood (*Artemisia absinthium* L.), pumpkin seeds (*Cucurbita pepo* L.), tansy flowers (*Tanacetum Vulgare* L.) and bulbs garlic (*Allium sativum* L.). In studies, liquid extract from these plant raw materials was isolated by percolation and its qualitative analysis was carried out [2]. *Artemisia* species are used worldwide for their antioxidant, antimicrobial, and anti-inflammatory properties. During the study, the phytochemical profile of two ethanol extracts obtained from the leaves and stems of *A. absinthium* L., as well as the biological potential (antioxidant activity, cytotoxic and anti-inflammatory properties). The extracts improved the anti-inflammatory effect in mice characterized by a diffuse distribution of neutrophils without exocytosis or microabscesses [3]. In a study, an aqueous extract of the leaves of *tansy vulgaris* (*Tanacetum vulgare* L.) by determining its potential toxicity after acute and chronic administration to rodents [4].

The aim of the study was to study the cumulative properties of the anthelmintic dry extract "Helminth-ART".

Methods

All studies were conducted on healthy animals that were quarantined for at least 10-14 days.

The object of our study was the dry extract of "Helminth-ART". "Helminth-ART" consists of a mixture of dry extracts isolated separately from anthelmintic plant materials, such as the aerial part

of the wormwood (*Artemisia absinthium* L.), pumpkin seeds (*Cucurbita pepo* L.), tansy flowers (*Tanacetum Vulgare* L.) and bulbs garlic (*Allium sativum* L.). This object is the substance of the "Helminth -ART" anthelmintic capsule.

An experiment to study the cumulative properties of an anthelmintic substance on 10 white mice weighing 20-22 g [5]. White mice were intragastrically injected with an aqueous solution of an anthelmintic substance. The minimum dose was 1 mg/kg. Then, every subsequent 4 days, the doses administered were increased by 1.5 times the previous daily doses. Accounting was carried out on the basis of the general clinical and physiological state of mice [6,7].

Results and Discussion

The study scheme, as well as the data obtained in the study of the cumulative properties of an aqueous solution of an anthelmintic substance, are presented in Table 1.

Table 1

Cumulative properties of an aqueous solution of an anthelmintic substance

Dose of administration	Duration of observation (days)					
	1-4	5-8	9-12	13-16	17-20	21-24
Daily administered dose for 4 days (ml/kg)	one	1.5	2.25	3.37	5.1	7.6
Total dose (ml/kg)	one	2.5	3.75	5.62	8.43	12.6
The number of dead heads from an aqueous solution of an anthelmintic substance	-	-	-	-	-	-

Discussion of the obtained results.

In the study of the study of the cumulative properties of the anthelmintic substance, in the first eight days clinically observed reduced activity, clustering of all mice for 20-30 minutes. After 45 - 60 minutes, all mice became active, freely consumed food and water.

During the entire period of administration of the preparation of an aqueous solution of an anthelmintic substance, mice did not show signs of clinical changes, such as cyanosis of the muzzle, ears, tail and limbs. Most mice had loose stools. The fur of the animals remained smooth and shiny, some animals showed lethargy and little activity, refusal of water and feed. However, after 12 hours, the animals returned to normal again. The same picture was observed on the 24th day of administration of the compared preparations.

The observed changes in the clinical manifestations and behavioral reactions of mice during the experiment were reversible, and the animals physiologically fully recovered. No death of animals was observed during the experiment.

In this regard, due to the low toxicity of the aqueous solution of the anthelmintic substance, the cumulation coefficient could not be determined

Conclusion

The cumulative properties of the anthelmintic substance were studied in an experiment on mice. Studies have shown that the investigated anthelmintic substance "Helminth -ART" does not have cumulative properties.

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