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Toxic Properties Under The Effect of Desmetrine

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Abstract: In the scientific article, the toxicodynamic and toxicokenitic properties of the drug desmetrine, which belongs to the group of modern pyrethroids produced in India, were determined on the basis of experiments.

Keywords: pyrethroid, drug, desmetrine, toxicodynamics, toxicokinetics, neurotropic, O'D16, mg / kg.

Introduction

Pyrethroid drugs, which are widely used in veterinary practice today, are likely to pose a significant threat to the environment and living organisms. Particularly when they drop into the climate, water or soil, their aggregation (aggregation) in these places can lead to the sign of their harmful impacts, imperiling human wellbeing, greenery and fauna, and all biodiversity in nature in common. When these pyrethroids enter the body of feathered creatures, they cause intense, inveterate and inactive shapes of harming, which antagonistically influence the efficiency and regenerative movement of feathered creatures. [5] Therefore, it is of practical importance to conduct a comprehensive toxicological study of the toxicodynamics and toxicokinetics of the specific effects of the use of a new drug desmetrine, which belongs to the group of pyrethroids.

The purpose of the study. Determination of toxicodynamic and toxicokinetic properties in the body of chickens poisoned by the pyrethroid drug desmetrine.

Materials and methods: The biochemical parameters of 25% emulsion form of desmetrine pyrethroid chicken blood produced in India were determined using biochemical analyzer VA-88A, the effect on the immune system was determined by GF Koromyslov et al.

Review. The study of the specifics of the toxicodynamics and toxicokinetics of pyrethroid poisoning allows us not only to assess in detail how dangerous they are for warm-blooded organisms, but also to know the organs and tissues where toxins can accumulate.

In such cases, it is of practical importance to make a timely diagnosis, to control the process of getting rid of poisoning, to know how to treat it.[1].

For our experiments, 10 head chickens were taken and divided into 5 groups from 2 head. To the chickens of the first experimental group, Od was administered orally from the drug dezmetrin in an amount of 16 -930 mg/kg. The second group of chickens was in control. Clinical signs of pyrethroid poisoning in chickens in the experiment occurred a few hours after the drug

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was given. In this case, after a short excitation in them, there were cases of fainting, palpitations in the muscles, excitation in the intestines and dearization of the stomach. The manifestation of clinical signs of such a manifestation of poisoning indicates that the drug has a neurotropic effect property.[3;4].

Table 1

Morphological and biochemical indicators of the blood of acute poisoned chickens with the drug Dezmetrin; OD16 -930 mg\kg (X+_ S X)

Blood indicators	The initial stage	Post-poisoning follow-up day:			
		1	7	14	21
Erythrocytes, 1012 / l	2,81±0,14 100	2,42±0,03 * 90	2,60±0,05 92	3,51±0,07 * 124	2,91±0,11 104
Leukocytes, 10 9 / l	19,6±1,1 100	16,2±0,9 * 86	19,1±0,7 97	23,3±0,5 * 119	20,0±0,5 102
Hemoglobin, 2/l	130,6±2,4 100	135,2±6,8 104	105,1±±1,7 * 85	112,6±5,8 88	128,1±5,9 97
Axe activity goods/ml/MGM	1,80±0,07 100	1,61±0,09 * 89	1,31±0,05 * 79	1,41±0,04 * 80	1,76±0,06 98
Number of poultry heads	5	5	3	3	3

In the experimental chickens, we saw a decrease in the amount of erythrocytes and leukocytes in the blood by 10-14%, hemoglobin by 15%, and acetylcholinesterase activity by 21%. The amount of methemoglobin in the blood increased by 2 times.

On the second day of the experiment, 2 head of chickens died of poisoning. When the bodies of chickens that died from this poisoning were dissected, we witnessed major pathological changes in their internal organs and tissues: impaired blood flow to internal organs, catarrhal inflammation of the intestinal mucosa, hepatic hemorrhage and enlargement, kidney and heart muscle spasms, and lung swelling.

The process of clinical recovery of pyrethroid-poisoned chickens occurred 14 days after poisoning.

In our study of the toxicokinetics of desmetrine artificial pyrethroid, experimental chickens were forcibly slaughtered at different times after acute poisoning in order to identify and diagnose the distribution and excretion pathways and stages of pyrethroid in the body and to determine the safe timing for slaughter of similar birds for consumption. [3]

When chickens were poisoned with the acute, non-lethal desmetrine drug, it was observed that it accumulated in all internal organs and tissues of experimental chickens. [2]

Residual levels of the drug desmetrine in the internal organs and tissues of experimental birds decreased steadily, and no residue was found 25 days after ingestion (Table 2).

Table 2

Storage, distribution and excretion of desmetrine in chickens (mg / kg)

Checked	Elapsed days after poisoning:			
	1	7	14	25
Liver	0,59	0,33	0,12	т-ди
Kidneys	0,44	0,23	0,7	т-ди
Heart muscle	0,51	0,32	0,6	т-ди
The brain	0,32	0,23	0,10	т-ди
Heart tissue	0,19	0,12	Изи	т-ди
The composition of the gastric nutrient mass	7,6	т-ди	т-ди	т-ди

The role of the cut during acute poisoning with Dezmetrin, when the meat samples of the slaughtered chickens were exposed to

organoleptic method, the blood was slightly absorbed from the relatively flat, enveloped muscle tissues, the muscles were red and dark red and there were some signs of bruising. At the cross-section of muscle tissue, the vessels are full of blood, the surface of the cut is slightly moist, the hands are smooth and sticky, the fat is light red and friable. The muscles are relaxed, have a smell that is not characteristic of chicken and beef. When taking a sample from such meat was boiled, a large amount of stains were formed on the surface, changes were noted, such as the appearance of the soup blurred, having an unpleasant smell. Organoleptic indicators, such as those that do not differ from each other in a nutshell, were observed mainly in meat products of chickens, which were forcibly slaughtered during the second day and the first week of the experiment.

14 days after the poisoning, organoleptic tests were performed: the surface of the smoked meat of chickens was dry, reddish in color, there were pronounced signs of hunger, the place of the cut of muscle tissue was low in moisture, some areas were pale, supple in color, supple in shape. Subcutaneous and internal fat is yellow in color, the meat has a specific smell. When this chicken meat was boiled, we witnessed that the soup was crisp and fragrant, on the surface of the soup were collected fats in the form of large drops.

Poultry poisoned with Dezmetrin is an excellent source of meat samples, veterinary-sanitary evaluation: changes in the amount of hydrogen ions (pH), acidic oxidation (K.o.k) coefficient, amin-ammonia nitrogen content in meat (A. a:a) and at the same time biochemical indicators, such as gasoline, pharmaceutical and color oxidative reactions, were carried out 24 hours after poultry was slaughtered (the period of maturity of quality meat products).

For two weeks and more after the acute effect with Dezmetrin, the pH measurement in the meat of chickens in the experiment was around 5,90-6,00 (in control 5,75-6,00), the rate of acid oxidation was 0,42-0,48 (in control 0,42-0,46), the nitrogen content with Amine was 0,87 mg and lower; the gasoline sample

Accordingly, acute poisoning with dezmetrin, the chickens in the experiment were forcibly slaughtered for the first two weeks, indicating that changes in the organaleptic and biochemical indicators of their meat were unsuitable for consumption of this meat.

Since the clinical manifestations of the neurotoxic effect of poisoning of chickens with acute poisoning with dezmetrin artificial pyrethroide are manifested, it is recommended to slaughter after 25 days, since after this period the consumption of meat and meat products is safe and useful.

Conclusion

1.Dezmetrin has been shown to have neurotoxic, metgemoglobin-forming, hepatotoxic, membranotoxic, anti-cholesterol and immunodepressive effects properties on the organism of poultry, this pesticide has been shown to have a toxic polytropic effect on the organism of hot-blooded animals.

2.The main accumulating organs of dezmetrin in toxicokinetics in the body of chickens are the liver, the heart muscle system and the kidneys, while a certain amount of pyretride is calculated in fat deposits.

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3.Acute poisoning with the drug Dezmetrin is allowed to slaughter chickens on meat, after 25 days after the onset of poisoning.

References

1. Galyautdinova G. G., Abulkhanova G. M., Tremasov M. Ya., Zimakov Yu. A. Toxicological aspects of the use of synthetic pyrethroids in agriculture.Veterinary medicine. -2005. –No. 5. - pp. 52-56.
2. Zhulenko V. N., Rabinovich M. I., Talanov G. A. Veterinary toxicology / Ed. V. N. Zhulenko. - M.: "Kolos", 2004 -384 p.
3. Kogan Yu. S. et al. Biochemical effects of the toxic effect of synthetic pyrethroids. Journal of Hygiene and Sanitation. 1986. No. 1. pp. 7-9.
4. Kokshareva N. V. et al. Synthetic pyrethroids: the mechanism of neurotoxic action, the search for treatment of acute poisoning. Modern problems of toxicology. Kiev, 2000. No. 3. p. 21-25.
5. Salimov Yu. The main parameters of acute toxicity of synthetic pyrethroids used in veterinary practice in Uzbekistan and some effects of their action on animals and birds. Journal of the Path of Science. Russia. 2016. № 10. (32).