

CLINICAL AND PATHOMORPHOLOGICAL PICTURE ACUTE POISONING OF QUAIL BY IMIDACLOPRID

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Introduction new forms of pesticides in agriculture and medicine, the determination of their toxic effects on the organism of animals and poultry is important. Neonicotinoids are neurotropic poisons. The toxic effect of neonicotinoids is similar to that of nicotine. The two-phase nature of the action is manifested by the depolarization of the membranes of the ganglionic neurons - the first phase of excitation, which changes to the second - oppression. Imidacloprid is an insecticide of selective action, which belongs to the group of nitrozoamines neonicotinoids.

Materials and methods of research. The experiments used the formulation of imidacloprid at a concentration of 600 g/dm³. Experiments were carried out on 49 male quail, an average weight of 200.0 ± 20.0 g, which were kept under optimal conditions in animal facility. The bird had free access to water and feed.

On the principle of analogues in the experiment six experimental bird groups were formed, using the following doses: 5, 10, 20, 40, 60 and 80 mg/kg of body weight, respectively (n = 7). A control bird (n = 7) was also formed. The emulsion of imidacloprid was administered orally with a probe.

The experiments were carried out in accordance with the existing regulations governing the organization of works using experimental animals and the observance of the principles of the "European Convention for the Protection of Vertebrate Animals Used for Experimental and Other Scientific Purposes" (Strasbourg, 1986).

The clinical condition of the experimental bird was observed for 14 days. Noticed the emergence and development of clinical signs of poisoning, the deadline for the death or restoration of the body to normal. After the death of the bird, a pathologoanatomic section was conducted to detect macroscopic changes.

Results of the research and their discussion. In the experiment, during the observation of the quail I and II experimental groups, did not notice the picture of acute poisoning.

In the birds of the III-VI experimental groups, during the first three hours of the experiment, the inhibition was recorded (semicoma - a weak reaction to external stimuli). Bird death was noted within the first two hours after imidacloprid administration.

In the quails remaining alive during the first day, there was a suppression (stupefaction) and lack of appetite. On the 2nd day there was a gradual normalization of the general condition of the bird. The clinical condition was characterized by negligible oppression (apathy), quail began to consume food and water. Already for the third day, poultry did not show signs of poisoning, until the end of the experiment their general condition did not differ from that in the bird of the control group.

After the death of the bird, a pathologoanatomical section was performed. In most individuals there was no or poorly expressed cadaveric numbness, changes in the feathers and visible mucous membranes were not noted. At the autopsy: in the oral cavity - the remains of the drug with mucus (however, changes in the mucous membranes of the oral cavity, trachea of the pharynx and esophagus were not noted); atrium enlarged; liver - enlarged, dark cherry color, blood-filled; in the muscular stomach - the flesh masses of a yellow-green color, probably due to a significant outflow of bile; blood vessels in the small intestine and signs of inflammation of the mucous membrane; Kidney dark pink with a gray shade.

Consequently, the acute poisoning of imidacloprid in the Texas quail is manifested by semicoma and anorexia. The death of the bird occurs within the first two hours after the introduction of the drug. According to the results of the pathologoanatomical autopsy revealed: an increase in the atrium and the liver, blood flow to the vessels of the internal organs; in the muscular stomach - feed masses of yellow-green color.