

A STUDY OF A COMMON QUINCE (CYDONIA OBLONGA) LEAF INFUSION IN A CHRONIC EXPERIMENT

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Aim of the study: To study the chronic toxicity of a quince leaf infusion (1:10) in albino rats.

Materials and methods. A 1:10 infusion of dried quince leaves was prepared in accordance with the requirements of the State Pharmacopoeia of the Russian Federation (14th edition, 2018). To study chronic toxicity, studies were conducted over a 5-month period on 40 white rats of both sexes weighing 180.0-210.0 g. The animals were divided into 3 groups: 1) intact rats – administered distilled water intragastrically (i/g) at a dose of 5 ml/kg body weight; 2 and 3 – experimental rats – administered quince leaf infusion (1:10) continuously intragastrically at doses of 2 and 5 ml/kg body weight. The general condition of the rats was monitored daily for 5 months, complete blood counts were analyzed, and individual biochemical studies were performed.

Study results. Experimental results showed that daily intramuscular administration of quince leaf infusion (1:10) at doses of 2 and 5 ml/kg body weight for 5 months did not cause any significant systemic toxic effects. General condition was monitored daily in all groups of rats over the course of 5 months.

The following parameters were examined: the animals' appearance, their behavior in a group, their motor activity, and the amount of water and food consumed. All animals were active throughout the experiments. In rats kept in a vivarium for 5 months and given daily intragastric administration of quince leaf infusion at doses of 2 and 5 ml/kg body weight, the survival rate was 98.8%–100%. All experimental animals were active and healthy. Studies have shown that over the course of 5 months, with daily intragastric administration of an infusion of quince leaves (1:10), no pathological changes in motor activity were observed in rats. In experimental animals, the general blood test and liver biochemical parameters (ALT, AST, alkaline phosphatase, creatinine, etc.) were almost identical to those in the intact series.

Conclusions. Thus, long-term intragastric administration of a quince leaf infusion (1:10) to experimental animals did not reveal any general toxic effects, allowing for the long-term use of dietary supplements based on quince leaves in patients.