

THE EXPERIMENTAL DETERMINATION OF TOXICOLOGICAL PROPERTIES AND ULCERATIVE EFFECT OF THE THICK BEAN EXTRACT

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Introduction. Besides a high pharmacological activity, one of the most important requirements for medications is their safety.

Aim – studying of acute toxicity of LD₅₀ of the thick bean extract (TBE) at intragastric introduction to mice and intra – abdominal introduction to rats, and also possible ulcero-genic action of TBE.

Materials and methods. The study of the TBE acute toxicity has been conducted by the method of Shtabskii B.M. Investigations of a possible damaging effect of the TBE (at doses – 10 mg/kg, 40 mg/kg and 100 mg/kg) on the gastric mucosa and 12 duodenal ulcer have been performed on Wistar rats by the method of J. Marazzi-Uberti. An investigation of the effect of TBE and acetylsalicylic acid (at doses of 40 mg/kg and 100 mg/kg) on the stomach and intestines of the animals has been performed on Wistar rats for 14 days under conditions when ethanol induced gastric ulcers. Ulcers of the gastric mucosa have been caused by the intragastric administration of 5 ml/kg of absolute alcohol to the animals fasted for 24 hours.

Results and discussion. The study outcome of acute toxicity at intragastric and intra-abdominal introduction of TBE have shown that the expressed intoxication and death of experimental animals in no one group it isn't established. Prolonged use of TBE in ED₅₀ – 40 mg/kg, hasn't shown ulcero-genic action on a mucous membrane of a digestive tract of animals, and on model of ethanol ulcers at rats of GEK in doses of 40 mg/kg and 100 mg/kg has shown insignificant damaging influence on a mucous membrane of a digestive tract – by 1,8 times and 1,5 times less, than at use of acetylsalicylic acid in doses of 40 mg/kg and 100 mg/kg.

Conclusions. While studying the acute toxicity of the TBE by intragastrically administration to the mice (at doses of 500 mg/kg, 5000 mg/kg, 10000 mg/kg and 15000 mg/kg) and intraperitoneal administration to the rats (at doses of 10 mg/kg, 100 mg/kg, 1000 mg/kg, 3000 mg/kg and 5000 mg/kg) we have established that the death of the experimental animals have not occurred. The TBE refers to the V toxicity class of the substances i.e. practically non-toxic ones, according to the toxicity classification of substances by Sidorov K.K. The TBE shows no ulcerogenic effect at doses of 20 mg/kg and 40 mg/kg. A minor ulcerogenic action of the TBE has been revealed only at a dose of 100 mg/kg on the gastric mucosa of the rats. The TBE has not potentiated ulcerogenic activity of ethanol on the model of ethanol gastric ulcers.