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**CHANGE OF FUNCTIONAL ACTIVITY A PART SYSTEM OF A HEMOSTASIS  
UNDER THE INFLUENCE OF**  
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**Relevance.** Currently, the modern pharmaceutical industry, the creation of pharmaceutical products based on vegetable raw materials is a priority, due to the absence of these drugs and unwanted side effects.

The liquid state of the blood is maintained thanks to the coordinated work of coagulation and anticoagulation systems. In unfavorable circumstances possible discoordination their activity with the occurrence of bleeding or thrombosis.

**Purpose of the study:** the effect of the alkaloid N-dezasetillappakonitin (N-Dal) on the blood clotting system, depending on the concentration and time of incubation in vitro of the drug in the plasma-rich and platelet-poor.

**Materials and methods.** The platelets were isolated by centrifugation at 1500 rpm, for 15 minutes, to precipitate the red blood cells. Plasma enriched with platelets was re-centrifuged for 10 min. At 3 thousand rpm. The platelet precipitate was suspended in 5 ml of media containing 150  $\mu\text{M}$  NaCl, 2.7  $\mu\text{M}$  KCl, 0.37  $\mu\text{M}$   $\text{NaH}_2\text{PO}_4$ , 1  $\mu\text{M}$   $\text{MgCl}_2$ , 1  $\mu\text{M}$   $\text{CaCl}_2$ , 5  $\mu\text{M}$  glucose, 10  $\mu\text{M}$  HEPES-NaOH, pH 6.55, 50 units/ml heparin, 0.35% serum albumin and 0.15 mg/ml apyrase.

**Results and its discussion.** N-Dal itself at concentrations of 60  $\mu\text{M}$  did not produce plasma coagulation and platelet aggregation. But in the study of the effect of N-Dal on thrombin and thrombin-effects of poison snakes (*Vipera lebetina*, *Echis multisquamatus* and *Akistrodon halys*) found that N-Dal largely dose-dependently reduce the influence of these poisons and thrombin (0.01g/ml) in the process of thrombosis and forming a fibrin clot in plasma rich in platelets. If we consider that an important feature of thrombin-like enzyme poisons of snakes, which distinguishes them from thrombin, is their ability to hydrolyze not only fibrinogen but also other proteins of the hemostatic system.

A dose-dependent anti-thrombogenic effect of the alkaloid N-Dal possibly due to the destruction of fibrin strands and the formation and accumulation of fibrinogen degradation products. Since anti-thrombogenic effect N-Dal is more pronounced in the plasma rich in platelets, possibly, its action is due to inhibition of the secretion of platelet activating blood clotting (thromboxane  $\text{A}_2$ ,  $\text{Ca}^{2+}$ , platelet activating factor (PAF), fibrinogen and many others).

**Conclusions.** Preliminary results indicate the anti-thrombogenic activity of the alkaloid N-Dal which is due to its effect on platelet hemostasis.