STUDY OF THE EFFECTS OF MUMIYO ON THE HUMAN BODY AND ITS APPLICATION

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Relevance of the problem. Currently, thrombi that form in the arteries, veins, and heart chambers, as well as their emboli, become the cause of myocardial infarctions, strokes, and pulmonary artery thromboembolism. Every year, thrombi and thromboembolisms lead to the deaths of nearly 25 million people, and millions more become disabled. Considering the numerous studies and claims regarding the therapeutic properties of mumiyo in Traditional Medicine (TM), as well as in the Ayurvedic and Siddha medical systems, and taking into account the lack of comprehensive evaluations on this issue, the present study is aimed at assessing the effects of the preliminary use of mumiyo—a traditional preparation well known in ancient medical practices of both the East and the West—on the anticoagulant properties of blood in rats subjected to tail injury

Research Methods. The conducted studies showed that exposure to mumiyo in rats increases bleeding time. To clarify the reasons for this effect, we investigated blood coagulation processes under the influence of mumiyo. The experiments were performed on Wistar rats older than 3 months and weighing between 250 and 300 g. The animals were kept in a temperature-controlled environment and had free access to standard rat chow and water. They were then randomly divided into four main groups: a control group and three experimental groups receiving mumiyo at doses of 250 mg, 500 mg, and 1000 mg. The effect of mumiyo on bleeding duration and blood loss in rats was assessed using the method described by I.E. Akopov and coauthors (1971). The essence of the method consists in cutting off the tip of the rat's tail, after which conclusions about the effect of the substance were drawn based on bleeding time and the volume of blood loss following intraperitoneal administration at doses of 0.25, 0.5, and 1.0 g/kg.

Results and Discussion. The data presented in the table indicate a significant increase in bleeding time and, consequently, an increase in blood loss under the influence of mumiyo. The table also shows that as the dose increases, both bleeding time and the volume of blood loss increase. When the dose is doubled (1 g/kg), the bleeding time slightly decreases compared to the 0.5 g/kg dose but still remains higher than at 0.25 g/kg. The volume of blood loss at a dose of 1 g/kg is almost identical to that at 0.5 g/kg ($p > 0.5$)

Experimental setup	Bleeding duration	Amount of blood loss (in mg of dry residue)
Nazorat guruppa	5,7 ± 0,21	35,0 ± 5,8
Mumiyo 0,25 g/kg	14,4 ± 1,07	440,0 ± 41,6
P	< 0,001	< 0,001
Mumiyo 0,5 g/kg	22,1 ± 4.16	322,2 ± 84,0
P	< 0,001	< 0,001
Mumiyo 1 g/kg	17,1 ± 0,47	364,2 ± 72,7
P	< 0,001	< 0,001

Conclusions. Based on the results of the experiment, it can be concluded that intraperitoneal administration of mumiyo at doses of 0.25, 0.5, and 1.0 g/kg in rats leads to a significant increase in bleeding time. This property of mumiyo may be used in clinical practice for the prevention and treatment of conditions associated with excessive blood coagulation..