

The influence of Greek walnut (*Juglans regia*) septum on the indexes of prothrombin of white mice during leucopenia

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Introduction: A method of biological modelling is widely used in Experimental Biology and Medicine to identify the complex mechanisms of development of pathological processes. Using of biological models helped to investigate mechanism of widely spread blood disease such as leucopenia. Treatment of leukopenia is especially effective when during therapy with medicaments is used the facilities of folk medicine. Based on this, till today it is very actual to search natural admixture, which have possibilities of immunocorrection, among them admixtures that have plant origin. Interest is extremely high to Greek walnut. Studies by using leucopenia experimental model (leucopenia caused by the injection of cyclophosphamide) revealed that the water extract of Greek walnut septum has the ability to normalize blood leukocyte formula after single and double injection of cyclophosphamide. First of all, sharply decreases number of white blood cells and simultaneously the indicators of platelet and red blood cells are altered during leucopenia.

Aim: Study of the impact of Greek walnut (*Juglans regia*) septum on the indexes of prothrombin of white mice using experimental model of leucopenia.

Materials and methods: Experiments were carried out on 50 white mice (20-25g). Animals were divided into 3 groups: 1. Control – intact animals; 2. I experimental group – animals with single injection of cyclophosphamide; 3. II experimental group – animals which were given perorally the water extract of Greek walnut septum twice (0.2ml) a day after the single injection of cyclophosphamide (cp); Indexes of blood prothrombin was measured during two weeks on Humaclot Junior, produced by HUMANA Diagnostics.

Results: Investigations have shown that a single injection of cyclophosphamide causes the small but statistically significant changing of blood prothrombin indexes. In particular, the time of prothrombin and INR are increased on the second day after injection. Accordingly, index of prothrombin is reduced. The time of prothrombin is returned to the control level at the 8th day after injection. The extract of Greek walnut septum cause the partly prevention of mentioned changes.

Conclusion: The extract of Greek walnut septum leads to correction of changed prothrombin indexes in white mice, caused after a single injection of cyclophosphamide.