

## CLINICAL AND DIAGNOSTIC VALUE D-DIMER IN THE STUDY DISORDERS OF BLOOD CLOTTING

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**Introduction.** For diagnosis of Disseminated intravascular coagulation (DIC) in patients with multiple organ pathology algorithm for Clinical Laboratory consists of several stages: research vessel-level platelet hemostatic coagulation mechanism and fibrinolytic activity. That is, the diagnosis of DIC is a complex, multistage and economically costly process that requires specialized equipment. Research D-dimer is required by the standards of treatment and diagnosis. However, in spite of the increasing use of frequencies, it has not yet received this test for a truly widespread use in our country; and where there is a possibility of its application, very frequent destination analysis "blind" and not an adequate interpretation of the results. Therefore, the question of using the D-dimer test in clinical practice, the peculiarities of the interpretation of its results and their clinical application remains relevant today.

**Aim.** To develop and propose an algorithm for assessing the state of the hemostasis system for the development of optimal laboratory diagnostic tactics in patients with the development of DIC.

**Materials and methods.** The basic principles of laboratory diagnostics of disorders of the system of hemocoagulation in the DIC were objects of the study. In accordance to the objectives of the study, hematological and hemostatic methods of research were carried out using samples of patients of the cardiological, surgical, oncological, gastroenterological profile and with possible development of the DIC-syndrome in the history of disease. Methods of studying all stages of hemostasis were carried out according to generally accepted methods. Thus, in order to diagnose the development of DIC, 17 indicators were used to characterize the hemostasis system. All indexes were compared with the control group of healthy volunteers.

**Results and discussion.** The results of research indicates an increase in blood clotting time and platelet aggregation, lowering of platelets and retraction of a blood clot, that indicate the phase 2 development of DIC. Concerning the parameters of coagulation hemostasis, APTCH, prothrombin time, thrombin time increase, and fibrinogen level decreases. In the study of the system of anti-condensation and fibrinolysis, activation of this system was established. D-dimer increase was found in all study group patients. However, depending on the increase in the level of this marker, we can testify to the presence of patients with DIC with different degrees of severity: in group 1 – the level of D-dimer increased by 2.2 times relative to the control group; in group 2, the level of D-dimer increased by 4.5-fold in relation to control and 3.0-fold in comparison with the reference value, which has a significant clinical significance and requires immediate pharmacotherapeutic measures.

**Conclusions.** Thus, taking into account the tendency of laboratory diagnostics, the use of D-dimer as a marker for prediction, monitoring and diagnosis of DIC is promising, unlike the "coagulation line", which combines more than 17 indicators and solves the actual scientific problem of clinical laboratory diagnosis, aimed at simplifying the algorithm of assessment of the state of the system of hemocoagulation in patients with possible development of DIC. However, the standardization of the quantitative determination of D-dimer requires further research.