PREDICTION OF VIOLATIONS OF PRIMARY AND SECONDARY HEMOSTASIS IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE

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Abstract

It is known that patients with chronic obstructive pulmonary disease may have deteriorations in both primary and secondary units of haemostasis. Until now, there is no convenient and accessible method to predict haemostatic disorders in this group of patients. Thus, the aim of the study was to assess the status of haemostasis in patients with chronic obstructive pulmonary disease, depending on the severity of the disease and level of systemic inflammation, in order to determine optimal prognostic indicators for formation of violations at both primary and secondary levels of haemostasis.

The study included 81 patients with chronic obstructive pulmonary disease I–IV degree of ventilation disorders, which formed the main group.

To assess the status of the primary units of haemostasis in all patients we performed the indication of platelet adhesion activity index and induced optical platelet aggregometry test. To assess the state of the secondary unit of haemostasis, a coagulogram was performed.

The severity of systemic inflammation was assessed by determining the C-reactive protein. To assess the predictive capabilities of studied parameters we used ROC-analysis.

In patients with chronic obstructive pulmonary disease, haemostatic disorders develop in more than half of patients (67.9% of patients – at the primary level and in 53.1% of individuals – at the secondary level of haemostasis). The optimal predictor for the formation of the primary unit abnormalities in patients with chronic obstructive pulmonary disease is platelet adhesion activity index. The value of platelet adhesion activity index more than 41.0% indicates hyperaggregation, below 28.0% – hypoaggregation. The optimal prognostic indicator for the formation of coagulation disorders in patients with chronic obstructive pulmonary disease is C-reactive protein. Its level higher than 4.62 mg/l indicates hypercoagulability.

Key words: chronic obstructive pulmonary disease, haemostatic disorders, systemic inflammation, diagnosis, prognosis.

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