CORRELATION BETWEEN HEMORHEOLOGICAL PARAMETERS AND THERMOGRAPHIC PERFUSION STUDY RESULTS

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The study was aimed at a preliminary comparison of selected rheological parameters of blood to the symptoms observed in thermographical studies in the group of healthy subjects and in the group of patients with perturbation in perfusion. The group consisted of 35 healthy objects, 15 objects after myocardial infarction and 15 diabetics. Blood viscosity measurements were performed by means of a rotary-oscillatory reometer *Contraves* LS 40. For each blood sample the hematocrit value was measured using the standard method. The plasma viscosity was calculated from the linear regression. Thermographic studies were performed in a thermostated chamber (21–22°C) by means of a thermographic (infrared) camera (AGEMA, Thermovision 870). The results of these studies in the the group of healthy patients revealed three subgroups characterized by the following features: i) proper thermographic result, ii) perturbations in the thermoregulation mechanism, iii) perturbations in both resting perfusion and in the thermoregulation mechanism (thermographic symptoms of Raynaud syndrome). The results of hemorheological measurements (flow curves) were analyzed using the Quemada model. No statistically significant differences between the groups were found in the average values of hematocrit, plasma viscosity, whole blood viscosity and the model parameters (k_0, k_∞ and γ'_c). However, some tendencies were observed towards elevated erythrocytes aggregability and increased plasma viscosity in the third sub-group of healthy objects. The data obtained in the groups with perfusion perturbations no distinct correlation were found between the perfusion efficiency measured by means of the thermographic method and the values of hemorheological parameters.