

**THE BIOCHEMICAL BLOOD ANALYSIS  
AND THE CHRONIC STRESS**

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Transport of substances occurs through blood and is carried out humoral interaction of bodies with each other. Each blood drop contains the information on everything that occurs in soma.

For interpretation of this information the biochemical analysis of blood - laboratory method of research serves which is used in physiology and medicine. It allows to understand, the condition internal bodies and effectively they functions. The received data by the Russian and foreign scientists convincingly testify to negative influence psychological and emotional stresses to the biochemical structure of blood practically on all parameters.

At the chronic stress psychosomatic pathology besides precisely expressed vegetative infringements the large changes in biochemical parameters of blood are revealed: increase density blood, change hormone balance (increase ACTH, STH, TTH, glucocorticoide, cathecholamine, thyroid gland hormones and insulin). The disbalance of glucose, cholesterol, tryglyceryde accrues, the whey ionogramme (Na, K, Ca, Mg, Cl) varies in blood. As a result the influence long kept of psychological and emotional stress occur histamine, cathecholamine, serothonine in blood. Cortisol, lactic, pyruvis, alanine aminotransferase, aspartate aminotransferase, antioxidizing activity, alpha-tocopherol,

malondialdehyde, dien conjugate parameters change sharply.

On the data of our researches in the biochemical analysis of blood there is no change of parameters leaving for normal intervals at the chronic stress. But their deviation from an average level is an attribute of vegetative balance infringement and threat of occurrence psychosomatic diseases.

The problem demands the further consideration. The acknowledgement of the practical conclusions is estimation criterion of the homeostasis regulation at the chronic stress. It is important for the early diagnostics opportunity of the dysfunction and it is urgent as the method showing efficiency of chosen treatment.

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The work was submitted to international scientific conference «Basic Research», Israel, April, 10-17, 2010. Received by editorial office on 14.02.2010.

**A MELATONIN IMPACT UPON THE PLATELET  
LINK OF HEMOSTASIS**E. Lazareva, U. Sazykina, M. Hock  
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Nowadays problems of direct impact of melatonin upon the nervous, endocrine, immune system activity as well as the state of hemostasis either in normal or in pathological condition are being widely discussed. This survey is supposed to study the impact of the melatonin medicine "Melaxen" on the platelet link of hemostasis in the experimental conditions. The test was carried out

within the winter-spring period on 40 white sexually-mature male rats, kept in a standard vivarium conditions with the interchange of natural and artificial light in order to exclude the impact of endogenous melatonin upon the hemostasis through the blocking of its synthesis. Under the affection of maximum and minimum doze of erythrocyte hemolysate the platelet aggregate activity (PAAm and PAAs) and platelet activity index (PAI) were estimated according to the results of the hemolysate-aggregation test. The experimental disfunction of platelets modelling was carried out via peroral introduction of aspirin in doze of 500 mg/kg to the animals of the second group. Within the third and the fourth group against the background of melaxen that was introduced in the course of a week in doze of 0,1 mg/kg and 10 mg/kg accordingly, the aspirin was introduced 24 hours before the test. The rats of the first group were kept in the standard vivarium conditions without any medical preparations.

The PAAm was  $90,9 \pm 20,4\%$ , the PAAs was  $4 \pm 5,69\%$ , while the PAI was  $4,73 \pm 1,22$

within the check group. Under the affection of acetylsalicylic acid at the expence of full thromboxane system blocking the blood plates aggregation ability was absolutely missed. However, the preliminary introduction of melaxen allowed us to significantly reduce the aspirin effect. The PAAm was raised up to  $5,0 \pm 17,7\%$ , and the PAAs – up to  $146,5 \pm 18,9\%$ . The PAI was  $3,72 \pm 0,63$ . The AATm within the fourth group animals was about  $98,3 \pm 8,31\%$ , while the AAPs index significantly exceeded the control point and made  $255,7 \pm 14,4\%$ , but PAI was close to control point ( $4,16 \pm 0,5$ ).

Thus, we can see that melatonin has a direct impact on the platelet link of hemostasis. Against its background blood plates conserve their aggregation process ability under the affection of antiaggregant. This effect is dependent on the doze of melaxen.

The article was presented for the international scientific conference "The modern problems of experimental and clinic medicine", Thailand (Bangkok-Pattaya), 20-30<sup>th</sup> of December 2009. Received by editorial office on 11.14.2009.