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The influence of a single application of the medical healing blanket (Multilayer Treatment Blanket - MTB) and of the placebo-blanket upon certain factors of homeostasis of practically healthy individuals was analyzed.

The dynamics of changeability of systolic (SP), diastolic (DP) and average dynamic (ADP) pressure levels were studied, as well as the activity of processes of peroxidisation of lipids (POL) and the state of antioxidised system (AOS) of the plasma and the erythrocyte, and parameters of the structural and functional characteristics of the erythrocyte membranes. The study was conducted on two groups of practically healthy individuals, under the ages of 20 to 52 (7 men and 11 women). In the first group the subjects were covered once, fully, for 30 minutes with the (MTB). In the second group the placebo-blanket was used instead.

Immediately after the procedure, in the first group a modest decrease of SP, DP and SDP (respectively with 5.8%, 2.8 % and 4.1%) was noted. In the second group, SP decreased by 23.9 % ($P < 0.001$), DP was increased by 21.3% ($P < 0.05$), SDP practically did not change. 1.5 hours later, after the completion of the procedure, in Group I the tendency towards a decrease of SP, DP and SDP became greater (respectively with 7.0%, 5.6%, 6.2%). In Group II the numbers practically returned to the original.

In the investigation of the level of nitrose-hemoglobin (NOHb) we established a direct linear dependence of its level upon the level of SDP. The analysis of data concerning the level changes of (NOHb) with the use of the MTB and Placebo showed a tendency towards a decrease of SDP under the influence of the MTB, related to the possible release of NO as a relaxant factor.

In Group I the data of the POL/AOS system of blood plasma is characterized by a modest activation of the free-radical processes and lipoperoxidation, accompanied by multidirectional changes of the activity of enzymatic antioxidants. Group II showed a clear tendency of a decrease in the accumulation of free radicals and products of POL, as well as decrease in the activity of the enzyme element of AOS.

The tendencies of change in the erythrocyte level data of the POL/AOS system were similar in both groups, but showed a much greater decrease in the accumulation of products of POL in Group II. The activation of the erythrocytes SOD and catalysis was more evident in Group I. In Group I the functional possibilities of the membrane worsened compared to the initial data, in Group II such dynamics were less clear.

Thus the comparative analysis of the data of chemo dynamics and of the POL/AOS system of the blood plasma and of the erythrocytes (the cell model) with the single use of the MTB and Placebo showed a principal difference in their influence on the organism of a healthy individual. The use of the TMB can be characterized as an adequate training method for one of the homeostatic systems of the human organism.

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