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THE ROLE OF MELATONIN IN THE REGULATION OF THE FUNCTIONAL ACTIVITY OF ENDOTHELIAL

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A method of laser Doppler flowmetry found that by 10 times with daily administration of melatonin (1 mg / kg) there is a significant increase in functional activity of endothelial 154 %, ($p \leq 0,05$) relative values recorded in intact animals. This leads to the growth of integrated indicators microhemodynamics, indicating that increase peripheral tissue perfusion and blood flow in microvessels modulation by increasing the endothelium-dependent vasodilatation. Possible mechanisms of action of melatonin on microhemodynamics.

MT in a physiological dose has the ability to exert a vasodilator effect on microvessels. Probably, it is with direct influence on microhemodynamics that its hypotensive effect is associated with systemic arterial hypertension. At the same time, as the results of this study have shown, MT also affects the extravascular components of vascular tone regulation, which confirms numerous data on its universal modulatory effect on the activity of the central nervous system and peripheral organs and tissues, demonstrating the high therapeutic potential in various diseases, especially associated

with the disruption of circadian rhythm, to which almost all "diseases of civilization" can be attributed.

The results of our study make a significant contribution to understanding the mechanisms of therapeutic effectiveness of MT and demonstrate the promise of further studies of the effect of MT on microhemodynamics in various experimental models.

Keywords: laser Doppler flowmetry, microhemodynamics, functional endothelial activity of melatonin.

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