

Endothelial dilatation

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Key words: Endothelium, nitric oxide, blood vessels dysfunction

Goal of the study: To demonstrate that endothelium has potential to regenerate.

Introduction: The endothelium releases factors that control vascular relaxation and contraction, thrombogenesis and fibrinolysis and platelet activation and inhibition. Endothelial cells actively and reactively participate in homeostasis and immune and inflammatory reactions. They regulate vascular tone [1].

Material and methods: There were analyzed articles from the PubMed database from the last 5 years 2019-2024, mentioning such words as “endothelium”, “nitric oxide”, as well as other literature that remains scientifically relevant.

Results: Primary endothelium-dependent substances that promote vascular relaxation are nitric oxide, prostacyclin, in collaboration with vascular contractile-endothelin including their physiology, mechanism of effect and determines role in endothelial dysfunction, up to the development of Acute Vascular Distress Syndrome [1-3]. They are involved in the manifestations of atherogenesis, autoimmune disease and infections processes. In humans endothelium-dependent regulation of vascular tone seems to be affected by ethnic origin.

Conclusion: Vascular tone is also regulated by adipokines and yet unidentified factors that are released from perivascular adipose tissue. These relaxing factors

stimulate potassium channel opening in vascular smooth muscle cells and could fight vascular dysfunction, the elimination of which stabilizes homeostasis [4-34].

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