

Vasomotor form of Endothelial Dysfunction in Systemic Vasculitis and Connective Tissue Diseases

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ABSTRACT

The mechanism of endothelium involvement in the occurrence and development of various pathological conditions is multifaceted and is associated not only with the regulation of vascular tone, but also with participation in the process of atherogenesis, thrombus formation, and protection of the integrity of the vascular wall. The endothelium plays a key role in maintaining normal vascular tone and structure, local homeostasis, and vascular wall cell proliferation processes. Endothelial cells are involved in all phases of acute and chronic inflammation, such as initial vasodilation, increased vascular permeability, and adhesion. Also, it has a significant role in the hemostasis system due to its antithrombogenic properties, and is also an important modulator of many biological and physiological properties of the vascular wall. Markers of the state of the endothelium can be considered anti-endothelial antibodies, von Willebrand factor, circulating endothelial cells, thrombomodulin and angiotensin-converting enzyme [46], the size of the intima-media complex and soluble cellular adhesion molecules. Endothelial dysfunction is characterized by an imbalance of vasodilatory (NO, prostacyclin) and vasoconstrictor (endothelial-1, angiotensin II) substances. The state of the endothelium determines the course of vascular lesions in various diseases of both rheumatic and non-rheumatic profile. There is evidence that endothelial dysfunction serves as an early precursor to thrombotic cardiovascular disorders. The issues of diagnosing endothelial dysfunction, its role in the pathogenesis of diffuse connective tissue diseases and systemic vasculitis, and its relationship with the state of the microcirculation system remain unclear, which served as a prerequisite for this work which aimed to study the state of the vasoregulatory function of the endothelium of peripheral vessels, its reserve capabilities and characteristic types of reactivity of the peripheral vascular bed in patients with systemic vasculitis and systemic diseases of connective tissue.

Keywords: Endothelial Dysfunction, Vasomotor, Systemic Vasculitis, Connective Tissue Diseases

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