47. THE NORMAL STRUCTURE AND PATHOLOGICAL CHANGES OF BLOOD VESSELS IN TYPE 2 DIABETES MELLITUS

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Introduction. About 422 million people have diabetes mellitus, and more than 95% have type II diabetes. It is a major cause of heart attacks, strokes, blindness, kidney failure and lower limb amputation. A lot of these diseases are the result of pathological changes in the structure of blood vessels. These vascular complications are called angiopathies. They are a major clinical problem and lead to a higher mortality rate in the general population.

Aim of study. To research on normal blood vessels structure and pathological changes in type II diabetes.

Method and Materials. The scientific articles from PubMed, Medscape, BMC databases were analyzed.

Results. The diabetes mellitus is associated with macrovascular (involving large arteries) diseases like stroke, myocardial infarction, and microvascular (involving small arteries and capillaries) diseases, such as retinopathy, nephropathy, neuropathy. In diabetic microangiopathy pathognomonic alterations include thickening of capillary basement membrane, increase of endothelial permeability, and dysfunction of endothelial and vascular smooth muscle cell. The most important pathologic processes in macrovascular disease are atherosclerosis and vascular stiffness. A lot of functional changes and inflammation in smooth muscle and endothelial cells of the vascular wall are responsible for proliferation, hypertrophy, remodeling and apoptosis.

Conclusion. Normal structure and function of blood vessels in type II diabetes are essential for the proper functioning of the body. The damage of blood vessels can lead to disabling diseases and premature death.