Role Of Diabetes and Hypertension in The Vascular Complications of The Extremities with Tissue Pattern Modifications and Their Role in Atherothrombotic Disease – A Histomorphometric Analysis

Abstract #0139

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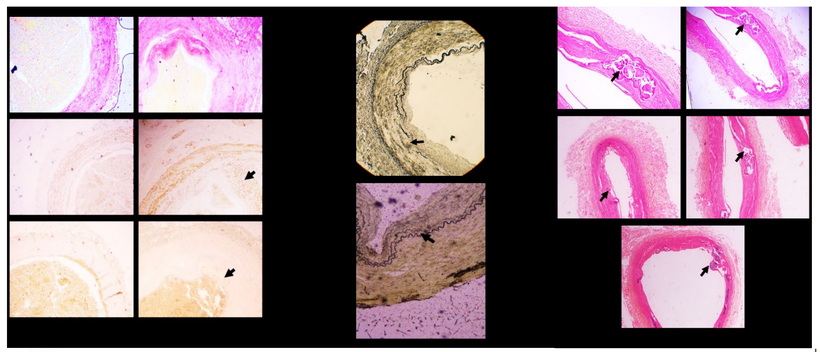
Introduction: Vascular complications of the extremities with diabetes and hypertension are the most serious indications and may lead to atherothrombotic disease that increases cardiovascular morbidity and mortality of the population and is a concern in diabetic vascular diseases that are asymptomatic.

Aim: The purpose of this study was to observe the distortions of endothelial lining, vascular smooth muscle cell conversion and connective tissue dysfunction.

Materials and methods: In this study total The Arteries of extremities at three different levels were collected from 50 cadavers and were grouped based on the age and disease(group 1 is age between 19 – 40 years is group 1, age between 41 – 60 years us group 2, above 61 years of age is group 3, hypertensive and diabetic groups). Arterial samples were embedded and processed to histomorphometric analysis with the help of H&E and VVG stain.



Result:

The thickness of Ti and the content of collagen fibers were found to increase significantly in diabetes. In this context, it is to be noted that the middle segment of the arteries are less liable to morphological changes in diseases conditions such as diabetes and hypertension

an increased content of collagen fibers and reduced elastic fibers were observed. Further, the content of smooth muscles was also found to be reduced.

Rerouting of vascular flow is common in the anterior tibial, posterior tibial and dorsalis pedis arteries as well as in radial and ulnar arteries during atherosclerotic condition which reduces the claudication (Tutar, Yildirim et al. 2016).

Conclusion: Our study confirmed that The connective tissue alteration in the arterial wall is the probable cause leading to vascular diseases and high-risk factor in hypertension and diabetes.

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