Hyperlipidemic Injuries in Aortic Endothelium of Different Ages——Morphology of Scanning Electron Microscopy

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Abstract

Three age groups of Leghorn cockerel from five weeks, five months and one year as the starting age were treated with hyperlipidemia either for four or eight weeks. Their aortic intimae were stained with Evans Blue before they were killed. Then the bluely stained and non-stained areas from aorta were obtained individually and observed under scanning electron microscope. The experiment showed that the shallow endothelial injuries were present in all three age groups in normal serum lipid level. While hyperlipidemia was yielded, the endothelium was subjected to multiple swollen "ball-like" lesions which actually were "foam-like" change of the endothelial cells. This morphological change appeared slower in one year group than that other two groups. The mononuclear cells were non-specifically attached on the endothelial surface in all condition, but these cells seem to be more active and observed often located between endothelial cell junctions in hyperlipidemic state. Platelets aggregated and attached on the surface of endothelium and even microthrombus formed when hyperlipidemia was acquired.

Key words: Endothelium Hyperlpidemia Scanning electron microscopy (SEM)

科研简讯

利用电子计算机系统辅助诊断和治疗水电解质和酸碱平行紊乱

（附属第一医院外科）

中山医科大学附属一院陈国锐教授等与数理教研室合作研制成功国内第一个辅助诊断和治疗临床水、电解质和酸碱平衡紊乱的电子计算机系统——WEABED-I。此系统比较全面地综合和发展了国外现有系统的特点，可诊断临床常见的各种水、电解质和酸碱平衡紊乱综合症，同时针对各个病人的特殊情况提供一个较详细完整的治疗方案。自1986年8月以来，经临床试用证明，此系统的诊断和治疗水平基本达到本专业专家水平而高于一般临床医生水平。该项研究成果于1987年6月在广东省第二届普外科学术会议和12月中南五省（区）第二届普外科学术会议上作了论文宣读，受到与会者一致好评，称其"为我国利用电子计算机解决临床水、电解质和酸碱平衡紊乱问题提供了一个新的方法"。