1200 FACTORS INCREASING RED BLOOD CELL AGGREGATION IN MEN WITH CORONARY ARTERY DISEASE

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Red blood cell aggregation value (AW) was found to be of good diagnostic value for coronary artery disease. Causes of increased aggregation value were investigated by means of protein analytical methods and standard laboratory techniques in 41 men with angiographically documented coronary artery disease. Best correlation coefficients were found between the red blood cell aggregation value and IgG, precipitable by 25g/l polyethyleneglycol 6000 ($r = 0.536$; $2P \leq 0.001$). In coronary artery disease patients with no previous myocardial infarction (N = 15) polyethyleneglycol precipitable IgM was found to correlate best with red blood cell aggregation ($r = 0.707$; $2P \leq 0.01$). In contrast to these results, patients without coronary stenosis demonstrated no significant correlation between the red blood cell aggregation value and the latter factors.
These results indicate a possible link between coronary artery disease, immune complexes and red blood cell aggregation. Platelet aggregation, as well as the coagulation system may also be influenced by these possibly specific immune complexes.

1201 EARLY CHANGES OF THE ENDOTHELIAL ANTITHROMBOTIC PROPERTIES IN CHOLESTEROL FED RABBITS. I-CHANGES OF A.D.P.-ASE AND 5'-N.T.-ASE ACTIVITIES

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Severe endothelial damage is usually associated to developing atherosclerotic lesions in rabbits. However the early functional endothelial changes are poorly known, specially as far as the endothelial antithrombotic mechanisms are concerned.
In cholesterol (1 g/die) fed rabbits the endothelial aortic A.D.P.-ase and 5'-N.T.-ase activities (according to Lieberman 1977) were investigated after 7,14 and 28 days of diet. A.D.P.-ase and 5'-N.T.-ase changes occurred very early. A.D.P.-ase activity decreased already after 7 days of diet (m.v. -45%,$P<0.001$) in comparison with control rabbits, but it did not show any further decrease after 14 and 24 days. A decrease of 5'-N.T.-ase activity (m.v. -36%,$P<0.01$) occurred only after 14 days of diet and it did not furtherly decrease after 28 days. These findings suggest that in cholesterol induced atherosclero - sis an early impairment of the antiaggregating properties of the endothelial wall occurs, but it does not increase for the length of time of our observation.

1202 EARLY CHANGES OF THE ENDOTHELIAL ANTITHROMBOTIC PROPERTIES IN CHOLESTEROL FED RABBITS. II-CHANGES OF HEPARANSULPHATE AND OTHER GAGs

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Sulphated mucopolysaccharides are synthetized by the endothelial cells and they occurr associated with the external cell surface and probably play a role in the non-thrombo= genic properties of the endothelial layer. Heparansulphate (H.S.),chondroitin-6-sulphate (Ch-6-S) and hyaluronic acid (H.A.) concentrations were investigated by electrophoresis on Titan III zip zone cellulose acetate plate.Uronic acids were determined according to Dische. After 7 days of diet a significant decrease (m.v. -63% , $P<0.001$) of H.S.,H.A. and Ch-6-S could be observed without changes of their reciprocal concentrations.After 14 days H.S.,H.A. and Ch-6-S increased and no differences were observed in comparison with control rabbits.However after 28 days of diet H.S.,H.A. and Ch-6-S showed a further and more pronounced decrease (m.v. -71%,$P<0.001$). Uronic acids showed changes tightly similar to those of sulphated glycosaminoglycans.