

P037 Increased monocyte attachment to laminin in diabetes mellitus. The role of the alpha2 and alphaL integrin subunits.

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Extracellular matrix proteins are oxidized after their exposure to reactive oxygen species. Monocyte attachment has been associated with the formation of the atheromatic lesion, **which is a frequent complication** of diabetes mellitus. In an attempt to investigate the biological significance of laminin oxidation in the initiation of the atherosclerotic process, monocyte attachment to oxidized and native laminin was studied, using monocytes derived from healthy volunteers and patients with diabetes mellitus type II. Moreover, the role of the alpha2 and alphaL integrin subunits in monocyte attachment to oxidized and native laminin was studied.

Monocytes were isolated from 12 blood samples taken either from 6 diabetic patients or from 6 age-matched healthy donors. Monocyte attachment was estimated using a myeloperoxidase assay. Our results indicate that monocyte laminin attachment differs between control and diabetic monocytes. Monocytes derived from diabetic patients showed an increased ability to attach to laminin. Control monocytes attached at a higher degree to oxidized laminin as compared to the non-oxidized molecule. Our results also showed the involvement of the alpha2 and alphaL integrin subunits in monocyte attachment to both native and oxidized laminin in control and diabetic monocytes.

These results indicate a modified interaction between monocytes and basement membranes in diabetes mellitus.

This work was funded by G.S.R.T (PENED 2003)