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Circulating Platelet Aggregates in Diabetes mellitus

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To the Editor,

The paper 'Platelet Aggregate Ratio in Diabetes mellitus', recently published by Davis et al. [1], deserves a few comments, derived from a study performed by us [2] on correlations between indices of haemostatic function and of lipid metabolism in 92 patients with 'adult-onset' diabetes compared with normal controls and subjects with reduced glucose tolerance, both comparable for age, sex, body weight and other characteristics with the diabetes group.

Analysis of variance and Student's t test showed no significant difference for platelet aggregates ratio (PAR) among the three groups (table I), confirming the results of Davis et al. [1]. However, when the group of clinically manifest diabetes was stratified in two subgroups with different metabolic control on the base of plasma Hb A_{1c} values, then the patients with a poor control (Hb A_{1c} > 9%) had PAR values significantly (at the 1 % level) lower than those with a good control (Hb A_{1c} < 9%). In accordance, we found a highly significant inverse correlation between PAR and Hb A_{1c} ($r = -0.257$; $p < 0.001$) on the whole population ($n = 182$), whereas no relationship was recorded between PAR and some lipid indices, such as plasma levels of total or HDL cholesterol, triglycerides, A or B apolipoprotein. If one accepts PAR as a reliable index of circulating platelet aggregates, then our data suggest that the increase of these aggregates in diabetes mellitus is not associated to the disease per se or to the related changes in lipid metabolism, but rather to the de-compensated glucose metabolism. Perhaps the difficulty of obtaining a consistent metabolic control in juvenile, insulin-dependent diabetes could justify the significant changes of PAR reported in this subgroup by Davis et al. [1] and by others.

Table I. Mean values of platelet aggregate ratio (Wu and Hoak method) in groups of diabetics, subjects with reduced glucose tolerance and normal controls

References

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Dettoni, A.G.; Civardi, E.; Pini, M.; Megha, A.: Correlation between haemostatic and lipid indices in diabetes mellitus and changes associated with stages of the disease (Abstract) Proc. 6th Int. Congr. on Thromb., Monte Carlo 1980, p. 166.

This letter was presented to Dr. Davis, who offers the following reply: