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La variation de l'équilibre glycémique (mais pas du poids corrélée positivement à la modification du risque cardiovasculaire absolu chez le sujet diabétique = Changes in glycaemic control (but not in body weight control) are positively correlated with changes in Coronary Risk Profile in diabetic patients

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Résumé / Abstract

Coronary Risk Profile (CRP), assessed according to the Framingham equation takes the presence of diabetes into account, but not the glycaemic control or the body overweight. We have performed an observational survey to study the respective roles of changes in body weight or glycaemic control on calculated CRP, in a given subject, by an effect on several items of the CRP equation (systolic blood pressure, total and HDL cholesterol) which can be modified by blood glucose or weight. We have studied the CRP of 179 type 1 and 208 type 2 diabetes patients, admitted in the department of diabetology of the Angers Hospital, twice (interval<3 years; 1.6±0.8 yr). The patients yielded no coronary heart disease, their age ranged from 30 to 74 yr (mean±SD: 53±13), they were not on antihypertensive or lipid lowering medication. Glycaemic control was assessed by glyco-hæmoglobin (HbA1c), systolic blood pressure (SBP) was measured with an automatic device (Dinamap). Total and HDL cholesterol were determined by an enzymatic method, in fasting patients. Only age at first examination was taken into account to compute CRP. Initially, SBP was 131±17 mmHg, total and HDL cholesterol were 2.20±0.47 et 0.56±0.20 g/L, respectively. SBP was positively correlated with body weight ($\text{Rho}=0.310$; $p<0.0001$), but not with HbA1c. Median 5 yr CRP was 5% (range: <1% - 25%). Between both admissions, mean change in body weight, HbA1c and 5 yr CRP was + 1.0 kg (range: -27 à +29). -0.2% (range: -4.5 à +7.6) et -0.01% (range: -10 à +13) respectively. Change in CRP between both admissions was associated with change in HbA1c ($\text{Rho}=0.109$; $p= 0.0315$) but not in body weight ($\text{Rho}=0.072$; $p=0.1588$). This result was explained by the effect of the change in HbA1c on total cholesterol ($\text{Rho}=0.151$; $p=0.003$), (no effect on SBP or HDL cholesterol: $\text{Rho}=0.008$ and $\text{Rho}=0.019$; NS, respectively). These results suggest that, in diabetic patients, changes in glycaemic control affect their CRP by an effect on total cholesterol, but the changes in body weight do not affect their CRP.

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