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Glycaemic and blood pressure control seems harder to improve than lipid control in type 2 diabetic patients: comparison of two surveys over 5 years in Belgium

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Background and aims: In order to tackle cardiovascular risk factors and prevent complications in type 2 diabetes (T2DM), European guidelines have set clear goals and recommendations for treatment in terms of glycaemic, blood pressure (BP) and lipid control. The purpose of this repeated survey over five years was to investigate the evolution in the extent to which T2DM patients received treatment and achieved the goals for glycated haemoglobin (HbA1c), total cholesterol, LDL (low density lipoprotein) cholesterol and BP as recommended by the European Task Force (ETF) for cardiovascular disease prevention.
Material and methods: A non-interventional, cross-sectional survey (OCAPI [Optimizing Cardiovascular Prevention in Diabetes]) was conducted in 2001 and repeated in 2006, which enrolled T2DM patients above 40 years (952 and 1108, respectively) at endocrinology departments spread throughout Belgium. Data was collected based on information present in the medical record of T2DM patients visiting the physician consecutively over a 2-month period. The first survey applied the goals of the second ETF (goals were respectively 6.5%, 190 mg/dL, 115 mg/dL and 130/85 mmHg for HbA1c, total and LDL-cholesterol and BP); the second survey these of the third ETF (6.1%, 175 mg/dL, 100 mg/dL and 130/80 mmHg). Still, for HbA1c we assessed the achievement of a more realistic target of <7% (as proposed by the American Diabetes Association) in both surveys.
Results: Insulin was used more widely in 2006 (74% of T2DM patients) compared to 2001 (46%; $p<0.001$), as were biguanides (58% vs 47%; $p<0.001$). Sulfonylureas were less used (17% vs 43%; $p<0.001$) and the proportion of glitazone users remained low in 2006 (4%; not measured in 2001). Over five years, more patients received antihypertensive treatment (79% vs 65%; $p<0.001$) and the use of statins had doubled (63% vs 29%; $p<0.001$). Although a higher proportion of T2DM patients reached the ETF goals for total cholesterol (52% in 2006 vs 29% in 2001; $p<0.001$) and LDL cholesterol (56% vs 43%; $p< 0.001$) - even with more stringent goals in 2006 -, there was no similar improvement in BP (21% versus 19%; $p=0.472$), more particularly because persistence of high systolic BP levels in numerous T2DM patients. Glycaemic control even deteriorated (37% vs 59% below the HbA1c level of 7%; $p<0.001$) when the two surveys are compared, despite apparently more aggressive glucose-lowering therapy. The latter observation might be related to longer duration of diabetes (13 years vs 9 years; $p< 0.001$) and higher body mass index (32 kg/m^2 vs 29 kg/m^2; $p< 0.001$) of the population in the second survey.

Conclusion: In a repeated cross-sectional survey over a 5 year period (2001-2006) in Belgium, HbA1c and systolic BP levels remained difficult to control in T2DM patients and the percentage of patients at goal did not increase - despite more intensive pharmacological therapy - whereas lipid goal achievement markedly improved thanks to a greater use of statins. Although partially explained by the demographic characteristics (more advanced diabetes and more overweight in the second survey), the apparent decline in glycaemic control needs further investigation and stresses the fact that even more stringent treatment is necessary to meet the goals set by the guidelines.