

DIABETES

Blood-pressure control and T2DM

Poor control of blood pressure is a strong predictor of the development of type 2 diabetes mellitus (T2DM) among patients with hypertension, according to an Italian population study. The increased risk of T2DM is independent of other risk factors, such as age, BMI and baseline blood pressure and fasting glucose level.

“We noticed that hypertensive patients present with an increased incidence of diabetes and there are clusters of patients in which the association is particularly strong,” says Bruno Trimarco of Federico II University of Naples, Italy. “As the presence of diabetes increases cardiovascular risk and necessitates aggressive antihypertensive treatment, the identification of those patients who are most likely to develop diabetes is important for the hypertensive specialist for tailoring the therapy to the patient’s need.”

The study included 1,754 patients with hypertension (age 52 ± 11 years, 43%

women) who had normal levels of fasting glucose at baseline. By the end of the 3.4 ± 1 year follow-up, 109 participants had new-onset T2DM. These patients were older, more obese and more likely to have metabolic syndrome than those who did not develop T2DM. These characteristics are known predictors of T2DM in the general population; nevertheless, among patients with these risk factors, only those with suboptimal blood-pressure control had T2DM. A close control of blood pressure seemed to efficiently prevent the development of T2DM: the risk of T2DM was twice as low in patients with optimally controlled blood pressure than in those who had uncontrolled blood pressure, despite antihypertensive therapy.

This study allows identification of those patients who are at risk of developing T2DM and who, therefore, require their blood pressure to be closely controlled. These data do not, however, reveal the underlying mechanisms that



link insufficiently controlled blood pressure to the development of T2DM.

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