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“Studies have demonstrated an inverse association with blood pressure with cardiovascular mortality, particularly amongst older people with diabetes”

New targets for treatment of hypertension in diabetes?

It is well recognised that treatment of hypertension in people with diabetes reduces macrovascular and microvascular complications. Consequently, many guidelines recommend that blood pressure treatment targets should be more aggressive in people with diabetes (<130/80 mmHg) compared with those without diabetes (<140/90 mmHg; Mancia et al, 2007; American Diabetes Association, 2012). More recently, however, these treatment targets in T2D guidelines are being questioned. This relates specifically to more contemporaneous evaluations of the relationship between hypertension in diabetes with coronary artery disease and the effect of intensive blood pressure control. These recent evaluations do not corroborate the data for aggressive blood pressure producing a reduction in coronary heart disease (Cooper-DeHoff et al 2010; Cushman et al, 2010). Indeed, in some studies, increases in adverse cardiovascular outcomes have been reported with low blood pressure (Beri et al, 2005; Van Hateren et al, 2010). A recent analysis of the Action to Control Cardiovascular Risk in Diabetes (ACCORD) study did not confirm beneficial effects with intensive blood pressure treatment (systolic blood pressure <120 mmHg) compared with systolic blood pressure of <140 mmHg, though there was a clear and significant reduction in the incidence of stroke (Cushman et al, 2010).

Studies have demonstrated an inverse association with blood pressure and cardiovascular mortality, particularly amongst older people with diabetes (Ronnback et al, 2006; Zhao et al, 2013). In an article described in this edition of *Cardio Digest* are the results from a prospective cohort study (2000–2009) on individuals with diabetes including 17 536 African American and 12 618 Caucasian people (Zhao et al, 2013). This study suggests that in this large hospital-based cohort, aggressive blood pressure control (systolic <120 mmHg and diastolic <70 mmHg) was associated with increased risk of coronary heart disease amongst African American and white Caucasian people with T2D. Furthermore, in this study, the harm of lower blood pressures was greater in older people.

Thus, there is no robust evidence available to support intensive lowering of blood pressure levels to <130/80 mmHg in patients with diabetes, except in those with nephropathy. Consequently, it may be appropriate to modify the treatment targets associated with guidelines, potentially to between 130–139 mmHg and 80–89 mmHg.

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