Hypertension in Diabetes Study IV. Therapeutic requirements to maintain tight blood pressure control.

Anonymous

Diabetologia. 1996 Dec; 39(12): 1554-61.

We report the efficacy of therapy over 5 years follow-up in 758 non-insulin-dependent diabetic patients in a prospective, randomised controlled study of therapy of mild hypertension. Patients were recruited who on antihypertensive therapy had systolic blood pressure over 150 mmHg or diastolic over 85 mmHg, or if not on therapy had systolic blood pressure over 160 mmHg or diastolic over 90 mmHg. Their mean blood pressure at entry to the study was 160/94 mmHg at a mean age of 57 years. They were allocated to tight control (aiming for systolic < 150/diastolic < 85 mmHg) or to less tight control (aiming for systolic < 180/diastolic < 105 mmHg). The tight control group were allocated to primary therapy either with a beta blocker (atenolol) or with an antiotensin converting enzyme inhibitor (captopril), with addition of other agents as required. Over 5 years, the mean blood pressure in the tight control group was significantly lower (143/82 vs 154/88 mmHg, $p < 0.001$). No difference was seen between those allocated to atenolol or captopril. The proportion of patients requiring three or more antihypertensive therapies to maintain tight control in those allocated to atenolol or captopril increased from 16 and 15%, respectively at 2 years to 25 and 26%, respectively at 5 years, whereas in the less tight control group at 2 and 5 years only 5 and 7%, respectively required three or more therapies. There was no difference in the incidence of side effects or hypoglycaemic episodes between those allocated to atenolol or captopril, but those allocated to atenolol increased their body weight by a mean of 2.3 kg compared with 0.5 kg in those allocated to captopril ($p < 0.01$). Allocation to atenolol was also associated with small increases in triglyceride, and decreases in LDL and HDL cholesterol, which are of uncertain clinical relevance. The study is continuing to determine whether the improved blood pressure control, which was obtained, will be beneficial in maintaining the health of patients by decreasing the incidence of major clinical complications, principally myocardial infarction and strokes, and microvascular complications, such as severe retinopathy requiring photocoagulation and deterioration of renal function.