

Hypertension in Diabetes Mellitus: Role of β -Blockers

The attempt of Dr Dunne et al.^[1] to convince practicing physicians that β -blockers are no longer contraindicated in patients with type 2 diabetes mellitus and that '[t]heir proven cardiovascular benefits would seem to easily tip the balance in favour of their use' is interesting. However, several points should not go unchallenged:

1. The authors cite the Medical Research Council (MRC) study^[2] as an example that treatment to lower blood pressure will reduce the risk of stroke and myocardial infarction, especially in the elderly. In this study, patients who were treated with β -blockers had no morbidity and mortality benefits despite the fact that blood pressure was lowered to the same extent with β -blockers as with diuretics. In fact, in patients receiving β -blockers, the rate of heart attack, stroke, cardiovascular mortality and all-cause mortality was similar to those receiving placebo. Thus, the MRC study is a good example of how patients can be exposed to the cost, incon-

venience and adverse effects of antihypertensive therapy without gaining any benefits.

2. The authors then discuss the high incidence of coronary artery disease in patients with hypertension and diabetes mellitus. Indeed, we have shown that total mortality doubles, and cardiovascular mortality almost triples, in patients with hypertension and diabetes mellitus compared with those who have hypertension alone. However, patients with diabetes mellitus had a much higher morbidity from coronary heart disease than patients without diabetes mellitus. In the United Kingdom Prospective Diabetes Study (UKPDS), mortality from coronary heart disease was almost 6 times higher than mortality from stroke.^[3]

3. Unfortunately, in the UKPDS study, antihypertensive therapy had no effect on coronary heart disease such as fatal or non-fatal myocardial infarction, angina pectoris or sudden death (fig. 1),^[4] although it did prevent diabetic complications and diminish cerebrovascular disease.

4. A recent systematic review has documented that β -blocker therapy invariably leads to a significant weight gain - not a very desirable feature in patients with diabetes mellitus.^[5] The fact that β -blockers have been shown to increase the risk of developing diabetes mellitus in patients without diabetes mellitus,^[6] and that patients with diabetes

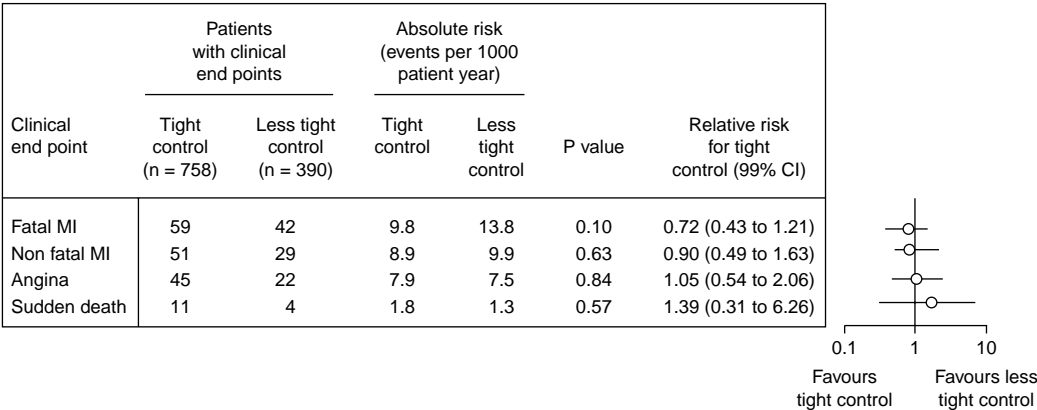


Fig. 1. Antihypertensive prescription and coronary heart disease in patients with diabetes mellitus and hypertension from the UK Prospective Diabetes Study Group,^[4] with permission.

mellitus commonly have peripheral vascular disease, erectile dysfunction and impotence, all of which are relative contraindications to the use of β -blockers, make this class of drug unattractive. Therefore, despite the well-documented potential to have a secondary cardioprotective effect in patients who had a myocardial infarction, β -blockers do not prevent the occurrence of an acute myocardial infarction. Clearly, there is no reason to change the paradigm that β -blockers are not recommended for initial therapy in patients with hypertension and diabetes mellitus.

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