Cardiovascular disease prevention in a newly diagnosed diabetic patient

Commentary by **JOHN AMERENA** MB BS, FRACP

Is it time to start hypolipidaemic and antihypertensive treatment in this patient with newly diagnosed diabetes?

Case scenario

My patient, Mark, is 53 years old and was diagnosed with type 2 diabetes six months ago. His blood sugar was not controlled well with diet and lifestyle modification, and he now takes metformin. He is not happy about needing medication.

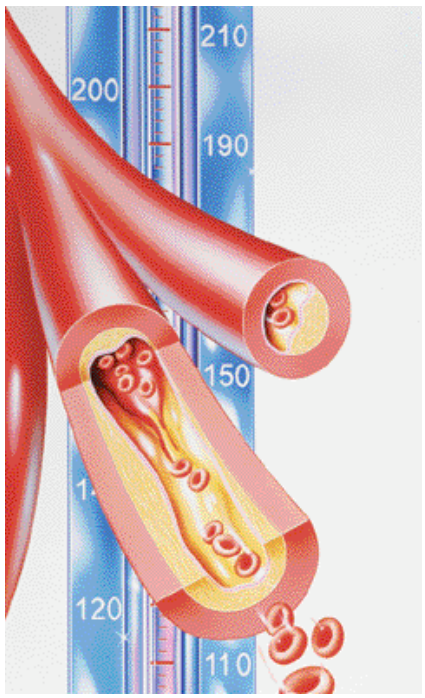
Despite his lifestyle changes, both his LDL-cholesterol level and systolic blood pressure are above recommended guidelines, but only just. He has an LDL-cholesterol level of 3.5 mmol/L, an HDL-cholesterol level of 1.2 mmol/L and a borderline blood pressure (measured on two separate occasions) of 135/75 mmHg; he has no proteinuria. Is it unquestionably time to start drug therapy to treat Mark's dyslipidaemia and blood pressure, and should he be taking aspirin?

Dr Amerena is Senior Lecturer (Cardiology), Department of Clinical and Biomedical Sciences, University of Melbourne (Geelong Campus), and Cardiologist at Geelong Hospital, Geelong, Vic.

Commentary

The problem that Mark presents is not uncommon in clinical practice. The incidence of diabetes is increasing progressively in Australian society, predominantly due to lifestyle factors such as poor diet, being overweight and lack of exercise. Mark has tried lifestyle modification without success and reluctantly has accepted the need for medication to stabilise his blood sugars. Despite his lifestyle changes, his lipid levels are less than ideal and his blood pressure is in the upper–normal range.

There is no doubt that Mark would benefit from lipid lowering: the Heart Protection Study (HPS) showed that in diabetic patients there was substantial reduction in cardiovascular events with simvastatin 40 mg if the total cholesterol level was above 3.5 mmol/L at enrolment. The findings of the Collaborative Atorvastatin Diabetes Study (CARDS) also suggest that atorvastatin (Lipitor) 10 mg is beneficial in this patient population. These studies have broadened the number of patients shown to benefit from lipid lowering therapy, and have been adopted widely with more liberal use of statins in the diabetic population. Unfortunately, PBS criteria for reimbursement have not kept pace with the evidence of benefit, and many diabetic patients do not qualify for statin treatment. In this situation, a private script can be offered, but in Mark's case he may well opt not to start treatment given his displeasure about the need for medication.



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Mark's blood pressure is in the upper–normal range and is above the target blood pressure for patients with type 2 diabetes according to Diabetes Australia (<130/80 mmHg), although the National Heart Foundation guidelines are a little more liberal (<130/85 mmHg). There is a linear relation between systolic blood pressure and cardiovascular events, so a lower blood pressure would be beneficial in reducing the risk of development of target organ damage and cardiovascular events, particularly as Mark is diabetic. Mark's blood pressure should be evaluated further with repeated clinic measurements, and the use of a 24-hour monitor and/or home blood pressure monitoring considered. If his average 24-hour blood pressure on monitoring is greater than 130/80 mmHg, one could make a strong case for initiation of therapy on the grounds of mild hypertension irrespective of his clinic blood pressures.

When therapy is instituted, an inhibitor of the renin–angiotensin system (an ACE inhibitor or an angiotensin-II receptor blocker [ARB]) should be the

initial treatment. The Heart Outcome Prevention Evaluation (HOPE) study would support the use of ramipril (Ramace, Tritace) 10 mg in this situation. However, if microalbuminuria is present, other ACE inhibitors and ARBs (irbesartan [Avapro, Karvea] 300 mg, candesartan [Atacand] 16 mg, and telmisartan [Micardis] 80 mg) have shown improvement in renal outcomes (reduction of proteinuria and slowed decline in renal function). There is some evidence that there are blood pressure independent effects with these agents when used in this context, but this is still controversial. Low dose diuretics can be used safely in patients with type 2 diabetes as add-on therapy, with little evidence to support the traditional concern regarding decline in glycaemic control. Calcium channel blockers are also effective in this population and are metabolically neutral.

Aspirin should also be considered in Mark's case. The current recommendation from Diabetes Australia is that aspirin should be considered in all patients with type 2 diabetes unless there is a contraindication to reduce the risk of cardiovascular events. MT

DECLARATION OF INTEREST: Dr Amerena has received sponsorship from, and acted as a consultant for, numerous pharmaceutical companies.