Amiodarone-induced thyrotoxicosis

Sir

Younis and co-authors in their article on amiodarone-induced thyrotoxicosis (AIT) (vol 63(9), 2002, p. 546) are not entirely correct regarding radioiodine uptake and colour flow Doppler sonography in differentiating between the two subtypes of AIT.

Younis et al indicated that type 1 AIT is characterized by normal or high radioiodine uptake which differentiates it from the characteristic low radioiodine uptake of type 2 AIT. Given the high iodine content of amiodarone, low or absent radioiodine uptake might be expected in all patients taking amiodarone. In the USA low or absent radioiodine uptake is observed in both type 1 and 2 AIT (Daniels, 2001), but in Europe, type 1 AIT may be associated with low, normal or high radioiodine uptake, possibly depending on pre-amiodarone iodide body status (Martino et al, 1988). Normal or high radioiodine uptake effectively excludes type 2 AIT, but a low radioiodine uptake cannot distinguish between type 1 and type 2 AIT.

Younis et al incorrectly state that on colour flow Doppler sonography there is reduced blood flow in type 1 AIT and normal (or correctly decreased) flow in type 2 AIT. As would be expected from their aetiology blood flow is normal or increased in type 1 AIT (nodular thyroid or latent Grave's disease) whereas it is decreased in type 2 AIT (destructive thyroiditis) (Bogazzi et al, 1997).

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Bogazzi F, Bartalena L, Brogioni S et al (1997) Color flow Doppler sonography rapidly differentiates type I and type II amiodarone-induced thyrotoxicosis. *Thyroid* **17:** 541–5
Daniels GH (2001) Amiodarone-induced thyrotoxicosis. *J Clin Endocrinol Metab* **86:** 3–8
Martino E, Bartalena L, Mariotti S et al (1988) Radioactive iodine thyroid uptake in patients with amiodarone-iodine-induced thyroid dysfunction. *Acta Endocrinol (Copenh)* **119:** 167–73

Sir,

We are grateful for Dr Gama's interest in our article. We agree that the use of radioiodine uptake may not reliably differentiate between type 1 and type 2 AIT, perhaps as a result of differences in dietary iodine uptake. Furthermore mixed forms often exist, in which the different features of type 1 and type 2 AIT may coexist (Martino et al, 2001). The existence of two separate subtypes of AIT is not universally accepted, and therefore limits the usefulness of the tests to differentiate them (Eaton et al, 2002). We would like to thank Dr Gama for correcting us on the use of colour flow Doppler in type 1 and 2 AIT.

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Eaton SEM, Euinton HA, Newman CM, Weetman AP, Bennet WM (2002) Clinical experience of amiodarone-induced thyrotoxicosis over a 3-year period: role of colour-flow doppler sonography. *Clin Endocrinol* **56:** 33–8
Martino E, Bartalena L, Bogazzi F, Braverman LE (2001) The effects of amiodarone on the thyroid. *Endocr Rev* **22:** 240–54

Lowering lipids in eye disease

Sir,

In his review McNaughton (vol 63(2), 2002, p. 88) contrasts the emerging role of lipids in cerebrovascular disease with the clearer picture seen in cardiovascular disease. Empirical trials of lipid-lowering agents appear to show promising results for the role of lipids in vascular ophthalmic disease.

A role for statins has been suggested in treating two leading causes of blindness in the UK. Atherosclerosis and high serum cholesterol show a weak association with age-related macular degeneration (ARMD). However, a retrospective study of 379 men and women aged 66–75 years found that those who took statins had an eleventh the risk of ARMD (after adjustment for coronary artery disease and smoking) than those not taking statins. While statistically significant, the actual risk is imprecise as the confidence intervals are wide.

In diabetes, elevated serum lipids are correlate with macular exudates and associated visual loss, but there is little evidence of a direct association with progression of retinopathy (Klein et al, 2002). A retrospective study found that the rate of preretinal and vitreous haemorrhage in patients with diabetic eye disease was reduced in those taking statins, independent of lipid level (unpublished data, S Banerjee, AKO Denniston, JM Gibson, PM Dodson, 2002).

An important therapeutic issue is whether statins may have a role even when lipids are apparently normal: what is 'normal' for a population may be too high for an individual. Statins may also have effects other than modification of the lipid profile, e.g. an antioxidant role, inhibition of endothelial cell apoptosis, preservation of ischaemic vasculature or stabilizing atherosclerotic plaques (Kureishi et al, 2000; Hall et al, 2001).

McNaughton highlights the LIPID trial with regard to a putative additional effect. Here the use of pravastatin was effective in primary stroke prevention, apparently independent of baseline cholesterol or size of cholesterol reduction (White et al, 2000); suggested mechanisms include stabilizing lipid plaques. In the Atherosclerosis Risk In Communities study the carotid artery intima media wall thickness was most strongly associated with severity of retinopathy (Klein et al, 2002). It may be that the benefit of statins seen in diabetic eye disease is attributable to changes in major vessel walls.

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Hall NF, Gale CR, Syddall H, Phillips DIW, Martyn CN (2001) Risk of macular degeneration in users of statins: cross sectional study *BMJ* **323:** 375–6
Klein R, Sharrett AR, Klein BE et al (2002) The association of atherosclerosis, vascular risk factors, and retinopathy in adults with diabetes : the atherosclerosis risk in communities study. *Ophthalmology* **109**(7): 1225–34
Kureishi Y, Luo Z, Shiojima I et al (2000) The HMG-CoA reductase inhibitor simvastatin activates the protein kinase Akt and promotes angiogenesis in normocholesterolemic animals. *Nature Med* **6:** 1004–10
White HD, Simes RJ, Anderson NE et al (2000) Pravastatin therapy and the risk of stroke. *N Engl J Med* **343:** 317–26