Cardiac resynchronization therapy in chronic heart failure with atrial fibrillation

Sir,

The benefit of optimal rate control in patients with atrial fibrillation who are on cardiac resynchronization therapy for heart failure, as outlined by Petkar et al (vol 69(7), 2008, p. 392), can be enhanced by atrioventricular junction ablation (Gasparini et al, 2008).

Out of 1285 heart failure patients undergoing cardiac resynchronization therapy, 243 had permanent atrial fibrillation at the time of the implant. Adjunctive therapy consisted of negative chronotropic drugs and ablation of the atrioventricular junction in 118 atrial fibrillation patients, and negative chronotropic drugs in the other 125. During a median follow-up of 34 months the mortality rate of patients with sinus rhythm was similar to that of patients with atrial fibrillation.

Survival benefit (the sole end point of the study) was significantly greater (P=0.01) in the atrioventricular junction ablation group (Gasparini et al, 2008), consistent with the observation that atrioventricular junction ablation can improve left ventricular systolic function in as many as 25% of atrial fibrillation patients who undergo this procedure (Redfield et al, 2000).

In a smaller study, comparing 209 heart failure patients who were in sinus rhythm with 86 heart failure patients in atrial fibrillation (including 20 with paroxysmal atrial fibrillation), cardiac resynchronization therapy was the sole intervention for patients in sinus rhythm as well as for those with atrial fibrillation. The investigators concluded that adjunctive atrioventricular junction ablation did not enhance the outcome in heart failure patients with atrial fibrillation (Khadjooi et al, 2008).

This conclusion did not take into account the fact that placing the patients with paroxysmal atrial fibrillation as part of the atrial fibrillation group might have introduced an element of bias, attributable to the fact that 'paroxysmal atrial fibrillation behave "clinically" like sinus rhythm patients, and drag, within the atrial fibrillation group, the positive effects conferred by cardiac resynchronization therapy in sinus rhythm' (Gasparini and Regoli, 2008). Evaluation of paroxysmal atrial fibrillation in cardiac resynchronization therapy studies (Gasparini and Regoli, 2008) is part of a resurgence of interest in estimating atrial fibrillation burden in patients with paroxysmal atrial fibrillation (Shah, 2008).

Interventional strategies that have been suggested as an adjunct to cardiac resynchronization therapy include atrial pacing to reduce the atrial fibrillation burden in paroxysmal atrial fibrillation and allow these patients to spend more time in sinus rhythm.

Oscar Jolobe
Retired Geriatrician
c/o John Rylands University Library
Manchester M13 9PP

Gasparini M, Regoli F (2008) How should paroxysmal atrial fibrillation be considered in CRT studies? *Heart* **27 February** electronic letter (http://heart.bmj.com/cgi/eletters/94/7/879#8097 accessed 4 November 2008)
Gasparini M, Auricchio A, Metra M et al (2008) Long-term survival in patients undergoing cardica resynchronisation therapy: the importance of performing atrio-ventricular junction ablation in patients with permanent atrial fibrillation. *Eur Heart J* **29:** 1644–52
Khadjooi K, Foley PW, Chalil S et al (2008) Long-term effects of cardiac resynchronisation therapy in patients with atrial fibrillation. *Heart* **94:** 879–83
Redfield MM, Kay N, Jenkins LS et al (2000) Tachycardia-related cardiomyopathy: A common cause of ventricular dysfunction in patients with atrial fibrillation referred for atrioventricular ablation. *Mayo Clin Proc* **75:** 790–5
Shah D (2008) Atrial fibrillation burden: a "hard" indicator of therapeutic efficacy and a prognostic marker to boot? *Eur Heart J* **29:** 964–5

Short-term cost cutting is not the answer

Sir,

Quotas for more expensive treatments in health care are being widely imposed throughout the NHS in an attempt to save money. The angiotensin II receptor blockers (ARBs) have been heavily examined because of their high acquisition cost. National Institute for Health and Clinical Excellence (NICE) guidelines for both hypertension and type 2 diabetes recommend ARBs in patients where an angiotensin-converting enzyme (ACE) inhibitor has not been tolerated. The ACE inhibitors and ARBs are recommended in all those with type 2 diabetes, accepting that ACE inhibitors have been tried before ARBs.

This is further complicated by the introduction of prescribing ratios. In some primary care trusts, ACE inhibitors and ARBs are becoming subject to target ratios for cost-effective prescribing, and so switching between these agents may occur. This type of ratio and switching practice assumes equivalence of these agents, which is not true for modes of action or side effects (Kaplan, 1999). The ONTARGET Investigators (2008) showed non-inferiority between ramipril and telmisartan. The primary end-point of cardiovascular death, myocardial infarction, stroke or hospitalization for congestive heart failure occurred in 16.66% of patients receiving telmisartan *vs* 16.46% of patients receiving ramipril. However, there were significant differences in tolerability between the ACE inhibitor and ARB arms of the study, further indicating that these agents are not equivalent.

Assuming that doctors follow NICE recommendations for the use of ARBs, imposition of ratios risks patients with diabetes being switched back to an ACE inhibitor to which they had previously shown intolerance. As a secondary care diabetes specialist, it is a concern that having prescribed an ARB based on evidence, a patient will be switched to an ACE inhibitor or another ARB in the community solely on grounds of cost.

To achieve the most appropriate management for type 2 diabetes, integrated care plans must be developed locally. Such plans, agreed by primary and secondary care, map out the patient pathway and include cases where specialist intervention and referral may be required. Although use of the cheapest agent may save money in drug costs, the cost of referrals and complications of diabetes may far outweigh this saving. Vulnerable, high-risk patients are being put at unnecessary risk of developing avoidable complications through inappropriate prescribing. This could result in an unnecessary burden on renal, diabetes and cardiology units across the country.

Marc Evans
Consultant Diabetologist and Endocrinologist
Llandough Hospital
Cardiff CF64 2XX

Kaplan N (1999) Angiotensin II receptor antagonists in the treatment of hypertension. *Am Fam Physician* **60**(4): 1185–90
ONTARGET Investigators (2008) Telmisartan, ramipril, or both in patients at high risk for vascular events. *N Engl J Med* **358**(15): 1547–59