LETTERS TO THE EDITOR

The British Heart Journal welcomes letters commenting on papers that it has published within the past six months.

All letters must be typed with double spacing and signed by all authors.

No letter should be more than 600 words.

In general, no letter should contain more than six references (also typed with double spacing).

Asymptomatic ischaemia during daily life in stable coronary artery disease: relevant or redundant?

Sir,—In their interesting review on the prognostic implications of silent myocardial ischaemia¹ Mulcahy et al, referring to our paper on silent ischaemia after myocardial infarction,² wrote: "Solimene et al performed ambulatory ST segment monitoring in 40 patients eight weeks after a first myocardial infarction and followed them for two years. Six patients had asymptomatic ischaemia during ambulatory monitoring. No events occurred in them: there was one cardiac death in a patient without ischaemia." There was some misinterpretation of our data. In fact, our investigation showed that 11 (27-5%) out of 40 patients had silent ischaemia after infarction: five only on exercise testing, five on exercise testing and Holter monitoring, and one on Holter monitoring. Of those 11 patients, four (36%) had a non-fatal cardiac event whereas only one (3-6%) of 29 patients without silent ischaemia had a cardiac event (fatal reinfarction) during this two year follow-up. Kaplan-Meier analysis showed that during this period patients without silent ischaemia were much less likely to experience a cardiac event (fatal or non-fatal) than patients with ischaemia (62-3%) (P < 0.007). We concluded that silent myocardial ischaemia after myocardial infarction is of considerable prognostic significance—a somewhat different conclusion from that reached by Mulcahy et al.

MARIA CECÍLIA SOLIMENE
Department of Health, Human Services, Public Health Service, National Institutes of Health, National Heart, Lung and Blood Institute
Bethesda, Maryland 20892, USA

This letter was shown to the authors, who reply as follows:

Sir—I thank Dr Solimene for her letter. Our review was about the prognostic significance of transient myocardial ischaemia detected on ambulatory ST segment moni-

toring and not exercise testing or any other investigation. In her letter Solimene confirms the figure that six patients with transient ischaemia on ambulatory monitoring after myocardial infarction.

In their study of 40 patients Solimene et al related silent ischaemia after myocardial infarction during ambulatory monitoring (that is, exercise testing, n = 10; ambulatory monitoring, n = 6; one or the other, n = 11) to events, and not to a straight assessment of ambulatory ischaemia versus outcome. Only one "hard" coronary event (acute myocardial infarction or sudden coronary death) was reported by Solimene et al (cardiac death), and this occurred in a patient who did not have transient ischaemia on ST segment monitoring. We reported this in our review which focused on the relation between transient ischaemia and subsequent death or non-fatal myocardial infarction. Recurrence of angina (referred to as a non-fatal cardiac event by Solimene et al) was reported to occur in four patients with silent ischaemia during ambulatory monitoring—Solimene et al do not state which. To reply to Solimene’s letter in the context of our review, and to establish whether "soft" end points occurred in those with transient ischaemia during daily life, we would need to know how many of these four recurrences of angina occurred in those with only a positive exercise test, and whether anything further happened to them.

DAVID MULCAHY
Department of Health, Human Services, Public Health Service, National Institutes of Health, National Heart, Lung and Blood Institute
Bethesda, Maryland 20892, USA

Issues in cardiac pacing: can asigm be justified?

Sir,—The continuing debate surrounding the cost effectiveness of rate adaptive pacing in the elderly remains handicapped by a lack of reliable data.¹ The antagonists would point to the absence of hard clinical evidence to support the use of sophisticated pacemaker technology in the elderly. Recent trials, however, have shown that patients with left bundle branch block and sinus rhythm aged over 70 years who were randomised to the Implantable Pacing System (IPS) had a significant increase in exercise time and peak oxygen consumption when compared to the control group.² It is important to realise, however, that these figures were based on the assumption that all electrophysiologically suitable patients aged over 75 would have been given DDD pacemakers.

Patients aged over 75 years may constitute a selected group in whom the presence of advanced conduction disease may be a marker of an advanced aging process. Limiting, non-cardiac disease or cognitive impairment, for example, previous stroke—is not uncommon in this group and such patients would not normally be considered for a dual chamber system. We do not know how many of the patients are offered VVI systems on the grounds of limiting, non-cardiac disease or cognitive impairment. Nevertheless, it is clear that available estimates of the financial impact of the BPEG guidelines are likely to be exaggerated and serve only to foster inappropriate implantation policies.

In addition to further clinical trials, which will likely to confirm the overall benefits of physiological pacing in the elderly, we need reliable information on the costs of implementing these research findings.

MAURICE HAREGUES
O NORMEROD
Cardiac Department,
John Radcliffe Hospital,
Headington, Oxford OX3 9DU

1 Payne GE, Shahen JD. Issues in cardiac pacing: can asigm be justified? Br Heart J 1994;72:102-3. 1


4 Avery PG, Banning AI, Lawrie M, McMurk L, Buchalter MB. Age should not be a contraindication for physiological pacing. Br Heart J 1994;71(suppl):P71. 1


be targeted for interventions such as treatment with angiotensin converting enzyme inhibitors after myocardial infarction, perhaps even irrespective of criteria generally implemented in other post-myocardial infarction subgroups.

OMP JOLLOBE
Department of Medicine for the Elderly,
Tamara General Hospital,
Feusselskamps,
Ashken-under-Lynes, Lancashire OL6 9RW

This letter was shown to the authors, who reply as follows:

Lancet Letter

Will serum enzymes and other proteins find a clinical application in the early diagnosis of myocardial infarction?

Sir,—Dr Timmis discussed the limitation of early biochemical diagnosis of acute myocardial infarction in guiding thrombolytic therapy.1

The mortality of infarct patients in Newham General Hospital who present without ST elevation is only a third of that of those with such elevation, none of them about one in 20 of such ST elevation. In addition, in infarct patients who present with predominant ST depression one year mortality is high (31%).2 De Wood et al’s angiographic study of non-Q wave infarction was performed up to 24 hours after acute myocardial infarction3 and the patency rate caused by spontaneous coronary re-canalisation was expected to be higher than that in the first 12 hours, the time window when thrombolytic therapy is believed to be effective.4 Even so, 26% of these patients had occupied coronary arteries and might have benefited from re-vascularisation treatment. The result of the ISIS-2 trial suggests that patients without ST elevation (except bundle branch block) would not benefit from thrombolytic therapy.5 However, the inclusion criteria of ISIS-2 raise the possibility that an appreciable number of these patients may not have had a myocardial infarction at all. No definitive data are currently available to guide treatment in patients with early biochemical confirmation of acute myocardial infarction, though the LATE study6 did include patients with old or equivocal electrocardiographic changes and raised concentrations of cardiac enzymes. The LATE study showed a significant reduction in mortality in patients treated with alteplase when thrombolysis was started 6–12 hours after onset of symptoms. Other treatments such as β blockers, ACE inhibition, and aspirin have been shown to be useful in the early management of acute myocardial infarction. Early biochemical diagnosis may be useful in guiding this treatment.

Furthermore the use of rapid assays may offer advantages in terms of efficiency. Patients with atypical chest pain may be discharged earlier after negative results. None of the less, to exclude acute myocardial infarction, myoglobin should be measured 4–6 hours after the onset of chest pain and creatinine kinase MB 6–8 hours after the onset of chest pain.7

Rapid biochemical diagnosis of acute myocardial infarction may be useful in guiding treatment and the more efficient management in coronary care units of patients who present with chest pain.8

H S LEE
Department of Cardiology, Killingbeck Hospital, Leeds LS3 1JH

S J CROSS
K JENNINGS
Department of Cardiology, Aberdeen Royal Infirmary, Aberdeen AB2 2BB

4 LATE Study Group. Late assessment of thrombolytic efficacy (LATE) study with alteplase 6–24 hours after onset of acute myocardial infarction. Lancet 1993;342: 759–66.

Lancet Letter

Sir,—Dr Timmis states correctly that there is doubt about whether the use of serum markers of myocardial damage to confirm myocardial infarction in patients with chest pain but without ST elevation in the electrocardiogram will lead to lives being saved by the use of thrombolytic therapy.1 However, he overstates the case against the use of serum markers in the finding discussion of the evidence. The fact is that no large study has yet been published to compare the vascular mortality of thrombolysis and placebo in the subgroup of patients who have a non-diagnostic electrocardiogram (ECG) on admission to hospital, but a confirmed diagnosis of infarction on discharge. The GISSI study enrolled 451 patients enrolled with patients with ST segment elevation, and the mortality in this whole group was 18.4%, and did not differ significantly whether streptokinase or placebo was used.2 ISIS-2 enrolled 1137 such patients, and again the mortality rate of 18.6% was not improved by streptokinase.3 The ASSET study distinguished only between normal and abnormal ECGs without distinguishing specific ECGs.4 ISIS-2 enrolled patients with ST segment elevation only.5 In the LATE study, 93% of patients had a discharge diagnosis of definite or possible infarction.6 In the group of 2544 patients without ST elevation on the ECG, the 35 day mortality was 7.5% in the placebo group and 6.4% in the group treated with alteplase.