LETTERS TO THE EDITOR

Scope

Heart welcomes letters commenting on papers published in the journal in the previous six months. Topics not related to papers published earlier in the journal may be introduced as a letter: letters reporting original data may be sent for peer review.

Presentation

Letters should be:

- initially submitted by fax +44 171 388 0323 or e-mail 100536.2733@compuserve.com (where practicable). Always follow this up by posting the paper copy to us
- not more than 600 words and six references in length
- typed in double spacing (fax copies and paper copy only)
- signed by all authors.

They may contain short tables or a small figure.

Investigation in general practice of patients with suspected heart failure

SIR,—Colquhoun *et al* clearly have a laudable aim in attempting to increase the appropriate and high quality usage of echocardiography in heart failure.¹ However, they do not add to their case by making statements that go further than is supported by the evidence and by ignoring important portions of the published evidence.

They state "ACE inhibitors should not be prescribed by either general practitioners or hospital doctors without prior echocardiographic examination". Yet the AIRE study² showed that treatment with ramipril in patients after acute myocardial infarction with clinical evidence of heart failure was safe and significantly reduced mortality compared with placebo. The ISIS-4 trial showed that treatment with captopril in broadly unselected patients after myocardial infarction was also safe and there is a statistically significant reduction in mortality,³ and the GISSI-3 trial showed a similar improvement with lisinopril.⁴ None of these trials required echocardiography before treatment with ACE inhibitors was started and all showed a significant improvement in mortality. When it is available echocardiography is clearly desirable but the suggestion that GPs and hospital doctors should not prescribe ACE inhibitors without prior echocardiographic examination may well have a negative impact on prescribing of ACE inhibitors in patients in whom they are clearly indicated. This may be just as important to appropriate long term treatment of heart disease as is appropriate use of echocardiography.

It seems extraordinary that an editorial in the *British Heart Journal* purporting to give instructions about starting treatment with ACE inhibitors should fail to mention these three landmark studies and unfortunate that an otherwise well argued paper is spoilt by

this didactic and inappropriate statement.

The position paper from the British Cardiac Society that the authors await might be more appropriately addressed to the adequate prescribing of ACE inhibitors after myocardial infarction.

MARK SIGNY
Department of Cardiology,
Worthing Hospital,
Park Avenue,
Worthing,
West Sussex BN11 2DH

- 1 Colquhoun MC, Wayne C, Monaghan MJ, Struthers AD, Mills PG. Investigation in general practice of patients with suspected heart failure. *Br Heart J* 1995;74:335-6.
- 2 The Acute Infarction Ramipril Efficacy (AIRE) study investigators. Effect of ramipril on mortality and morbidity of survivors of acute myocardial infarction with clinical evidence of heart failure. *Lancet* 1993;342:821-8.
- 3 Fourth International Study of Infarct Survival collaborative group. ISIS-4: A randomised factorial trial assessing early oral captopril, oral mononitrate, and intravenous magnesium sulphate in 58 050 patients with suspected acute myocardial infarction. *Lancet* 1995;345:669-85.
- 4 Gruppo Italiano per lo Studio Della Sopravvivenza Nell' Infarto Miocardico. GISSI-3: Effects of lisinopril and transdermal glyceryltrinitrate singly and together on 6-week mortality and ventricular function after myocardial infarction. *Lancet* 1994;343:1115-22.

SIR,—While we all agree that accurate diagnosis of heart failure may be difficult for both general practitioners and hospital physicians alike, we do believe that open access to complex and expensive investigations, such as cross sectional colour Doppler echocardiography, is not necessarily the best approach. We and others^{1,2} have argued that open access to specialist cardiological opinion provides more cost effective use of limited resources. For example, in a study in Edinburgh of open access echocardiography only 19% of referred patients had left ventricular dysfunction.³ In comparison by using a same day (fast track) cardiology out-patient service, at which a cardiology trainee first assesses the patient and gate-keeps access to investigations, we increased the detection of abnormality to over 70%.⁴

The authors of your editorial rather dismissed the value of clinical assessment and simple investigations like chest x ray.⁵ A simple scoring system which includes symptoms, physical signs, and chest x ray can be used to grade patients into definite and possible heart failure categories. Patients with low scores are unlikely to have heart failure.⁶ We have used this scoring system to assess the presence of heart failure in one general practice with 4200 patients. From the computerised diagnostic index we identified 201 patients with coronary heart disease of which 89 (mean age 72, range 52-93; 30 males) were receiving repeat prescriptions for diuretics and/or ACE inhibitors. When we reviewed the medical files of these 89 patients, 31 (35%) had a score indicative of heart failure; 10 were already taking ACE inhibitors, four had been intolerant of them in the past, and in five they were unsuitable because of contraindications. Of the remainder, seven were already under the care of hospital physicians who were asked to assess the need for ACE inhibitors (by echocardiography if necessary). In three definite confirmatory data had previously been documented and treatment with ACE inhibitors was started immediately. Two patients were referred for echocardiography. Of the 18 (20%) with

possible heart failure two were already taking ACE inhibitors, eight were unsuitable, four were reviewed by the hospital physician, and four were referred for echocardiography. Of the remaining 40 (45%) who had a low probability of heart failure, by the scoring system, seven were already on ACE inhibitors because of hypertension and five were referred for echocardiography. Thus 11 (12%) only were referred specifically for echocardiography. A dedicated one-stop clinic was organised so that patients attended for an echocardiogram and an opinion from a consultant cardiologist at the same visit. At this clinic seven had normal left ventricular function by echocardiography and two patients were given ACE inhibitors.

This study shows that collaboration between primary care physicians and hospital based specialists can improve the delivery of care to patients. A structured approach to the problem can be used to devise a system of prioritising referrals for echocardiography. If the referrals are controlled, the backlog of patients in general practice who may benefit from ACE inhibitors can be accommodated. Many of us oppose open access echocardiography because we believe it is a poor use of limited resources. Targeting resources to an appropriate patient population is more cost effective.

JANET HALL
Trainee in general practice
EDWARD BIRKBY
General practitioner
K S CHANNER
Consultant cardiologist and physician
Cardiology Department,
Royal Hallamshire Hospital,
Glossop Road,
Sheffield, S10 2JF

- 1 O'Toole L, Oates A, Channer KS. Open access to specialist opinion is preferable. *BMJ* 1995;311:326.
- 2 Hampton JR, Barlow AR. Open access. *BMJ* 1995;310:611-2.
- 3 Francis CM, Cruana L, Kearney P, Love M, Sutherland GR, Starkey IR, *et al*. Open access echocardiography in management of heart failure in the community. *BMJ* 1995;310:634-6.
- 4 O'Toole L, Channer KS. Evaluation of a fast track cardiology out patient service. *Br J Cardiol* 1995;2:95-9.
- 5 Colquhoun MC, Wayne C, Monaghan MJ, Struthers AD, Mills PG. Investigation in general practice of patients with suspected heart failure. *Br Heart J* 1995;74:335-6.
- 6 Carlson KJ, Lee DC, Goroll AH, Leahy M, Johnson RA. An analysis of physicians reasons for prescribing long-term digitalis therapy in out-patients. *J Chron Dis* 1985;38:733-9.

SIR,—The campaign for general practitioners to obtain echo-Doppler studies in all patients with suspected heart failure has now been supported by *Heart* and looks set to be endorsed by the British Cardiac Society. This is unfortunate because despite the diagnostic value of echocardiography I remain unconvinced it is needed to manage heart failure in general practice.

The first paragraph of your editorial is packed full of statistics about heart failure but fails to mention that the commonest cause, accounting for most cases, is myocardial infarction. Recognition of dyspnoea and signs of fluid retention requires only rudimentary clinical skills and if these findings are associated with a history of myocardial infarction or the presence of Q waves on the electrocardiogram there can be little reasonable doubt about the diagnosis or the need for treatment with a diuretic and an ACE

inhibitor. Indeed, it takes only a minor distortion of clinical trial results to accept that signs of fluid retention and a history of myocardial infarction provide a priori grounds for treatment with these drugs. Under these circumstances (which obtain in most patients presenting with heart failure) what additional information affecting patient management is provided by an echocardiogram? It may be positively unhelpful because, in addition to the regional wall motion abnormality, mitral or tricuspid regurgitation will usually be identified (but not quantified), leaving the general practitioner to make additional decisions about valvar dysfunction, which is rarely of clinical relevance. The situation is different, of course, when there is no history or electrocardiographic evidence of myocardial infarction or when there are clear signs of aortic or mitral valve disease. Referral for a specialist opinion is then required when appropriate investigation, including echo-Doppler studies, can be carried out.

If prescription rates for ACE inhibitors are too low the remedy must lie in educating general practitioners about the proper indications for these drugs, not mounting a campaign for additional investigations that will delay the application of treatment and, in most cases, merely duplicate the information provided by simple clinical findings and an electrocardiogram. Let us hope that the British Cardiac Society Working Group will come to a sensible conclusion on this matter.

ADAM D TIMMIS
London Chest Hospital,
Bonner Road,
London E2 9JX

SIR,—Your editorial focused on echocardiography in the diagnosis and management of heart failure, a topic that was the subject of a *BMJ* editorial¹ which generated substantial correspondence.

My concern is not with the undoubted value of echocardiography in selected patients with heart disease but its widespread use as part of the initial assessment. The authors leave the reader with the impression that not to do an echocardiogram in a patient with heart failure is negligent—something which is far from the case.

To my mind the most valuable screening investigation is the chest x ray, which is readily accessible to general practice and is a much under-used tool in the assessment of patients presenting with breathlessness and/or ankle oedema. The presence of cardiomegaly or pulmonary congestion would strongly favour a cardiac cause for the breathlessness as well as excluding respiratory causes not evident clinically. I therefore take exception to the comment that the contributions of the chest x ray and electrocardiogram are “limited”.

The Royal Sussex County Hospital has operated an open access echocardiography service for the last year.² Patients with heart failure are referred if:

- a cardiac murmur is present (in this I entirely agree with the authors)
- a patient is under 70 and the cause is in doubt
- they are resistant to standard treatment

We have generally found that the GPs find it valuable as a screening procedure for murmurs but are much less certain what to do with the information when there is myocardial disease.

Echocardiography is undoubtedly valuable in selected cases of heart failure, but to investigate *all* patients with heart failure is both unnecessary clinically and ties up valuable technician time, something which at present is a scarce commodity nationally.

C DAVIDSON
The Royal Sussex County Hospital
Eastern Road
Brighton BN2 5BE

1 Hampton JR, Barlow AR. Open access. *BMJ* 1995;310:611–2.

2 Wong PSC, Doshi S. Service is valuable for murmurs too. *BMJ* 1995;311:326.

These letters were shown to the authors, who reply as follows:

SIR,—We are encouraged by the responses to our Editorial. These illustrate some of the ramifications of the subject that space prevented us discussing further. Access to echocardiography for general practitioners remains a complex and topical subject. We had two intentions: one as Dr Timmis notes was to initiate a debate rather than a campaign; the other was to emphasise Dr Channer's point that collaboration between primary and secondary care should be the basis for tackling this important subject.

As Dr Signy, Dr Timmis, Dr Clubb and Mr Clubb¹ highlight, the question of whether to give ACE inhibitors after myocardial infarction is an extremely important one which is why the *British Heart Journal* had devoted two other editorials to the subject in 1995.^{2,3} We intended to highlight a different clinical problem and our editorial was written when the two papers on ACE inhibitors and myocardial infarction were “in press”. For the sake of completeness we should have referred to them. None the less, the important issue in primary care is the diagnosis of heart failure in patients who have not sustained a Q wave infarct. Whether or not a cardiologist is consulted should not, indeed must not, merely reflect arrangements for patient care. We suspect the most effective approach is that both an echocardiogram and a consultant cardiologist should be involved before a patient with heart failure is given long term treatment with ACE inhibitors. Indeed the European Task Force on heart failure has recommended that echocardiography should be used routinely for the optimal diagnosis of heart failure.⁴

Dr Timmis highlights possible difficulties with reporting of Doppler (rather than echocardiographic) studies by the inexperienced. We know that clinically misleading reports about the significance of trivial Doppler detected mitral or tricuspid regurgitation do not emanate from his noninvasive department. In our editorial we wished to highlight the importance of the maintenance of both high quality recording and reporting as more investigations are carried out. In other words quality must not be sacrificed for quantity. Otherwise, as Dr Timmis points out, the increased availability of the echo and Doppler studies will be self defeating.

We are grateful to the correspondents for emphasising the importance of clinical skills. It was not our intention to ignore or downgrade these. The diagnosis of end stage mitral or aortic stenosis and left atrial myxoma can challenge the most astute clinician, however, and these conditions usually pre-

sent with “heart failure”. Obesity, coexisting lung disease, and anxiety can all pose difficulties to tax our clinical skills.

The ECG, apart from documenting a Q wave myocardial infarct or atrial fibrillation, has no role in the diagnosis of the functional abnormality of heart failure. The role of the chest x ray is more debatable and some might favour a role for isotope scanning especially post infarction. An accurately reported echocardiogram has the great advantage, over both the ECG and chest x ray, of diagnosing valvar disease and directly quantifying the impairment of myocardial function.

The established value of ACE inhibitors in patients with heart failure focuses attention on the need for accurate diagnosis. In many patients in primary care previous myocardial infarction is not the cause of heart failure. Referral to a heart failure clinic, as described by Dr Channer and his general practitioner colleagues, with ready access to echocardiography offers a balance between clinical practice and over-reliance on technology. Alternative arrangements would require jointly agreed protocols on referral criteria to avoid inappropriate use of an open access echocardiography service together with appropriate intervention by the supervising cardiologist when the findings are unexpected.

Dr Davidson makes valuable points clearly based on experience, though his ageist approach may cause some dissent from articulate septuagenarians. The published studies do, however, indicate that about 30% of patients treated with ACE inhibitors do not have heart failure on echocardiography,^{5,6} which perhaps accounts for their resistance to treatment.

We are sure that the British Cardiac Society/Royal College of Physicians group addressing this issue will note our correspondents' points about the management of patients after myocardial infarction in primary care and the need for a consultant cardiologist input into the diagnosis and therapeutic process.

M C COLQUHOUN
General practitioner, Malvern
COLIN WAINE
Director of Primary Care, Sunderland Health
Commission
M J MONAGHAN
President, British Society of Echocardiography
A D STRUTHERS
Department of Clinical Pharmacology,
Ninewells Hospital, Dundee
P G MILLS
Associate editor, *Heart*

1 Clubb AS, Clubb MR. Open-access echocardiography. *Br J Gen Pract* 1996;46:122.

2 Coats AJS. ACE inhibitors after myocardial infarction: selection and treatment for all. *Br Heart J* 1995;73:395–6.

3 Lindsay HSJ, Zaman AG, Cowan JC. ACE inhibitors after myocardial infarction: patient selection or treatment for all? *Br Heart J* 1995;73:397–400.

4 The task force on heart failure of the European Society of Cardiology. Guidelines for the diagnosis of heart failure. *Eur Heart J* 1995; 16:741–51.

5 O'Toole L, Channer KS. Evaluation of a fast track cardiology outpatient service. *Br J Cardiol* 1995;2:95–9.

6 Colquhoun MC, Waine C, Monaghan MJ, Struthers AD, Mills PG. Investigation in general practice of patients with suspected heart failure. *Br Heart J* 1995;74:335–6.

SIR,—I read with interest the editorial by Colquhoun *et al* on the management of heart failure in general practice,¹ as an open access echocardiography service has been

piloted in Darlington.² Having noticed, however, that the reference to our work in your editorial was incorrect, I looked at the remaining references more critically. Of twenty references cited, no less than six were incorrect (references 3, 6, 11, 13, 15, 19). This is despite there being five authors, one of whom is currently an associate editor of *Heart*. Furthermore six references were to abstracts; appropriate perhaps for a contemporary subject, but of the three from McMurray,³⁻⁵ two referred to the same data which has since been published in a peer reviewed journal⁶ as has the other abstract.⁷

It is of course common for original articles to have multiple authors although strict authorship criteria are applied.⁸ I accept that the issue spanned several clinical disciplines including general practice, cardiology, echocardiography, and pharmacology. In an attempt to cover these areas, the authorship was "politically correct" such that representatives from each area were involved. Sadly this example of multiple authorship was a sham, as witnessed by the failure to recognise multiple errors in referencing.

Editorials generally enjoy wider readership than do original papers and readers trust the author(s) to carefully review and summarise a subject. References form the cornerstone of any scientific presentation: major errors question the thoroughness of this process and in consequence, the article as a whole. But the issue is broader than just sloppy referencing. Given that the impact of an editorial will be greater, editorial boards must be *more* rather than less critical about authorship. I am to be convinced that more than one or two authors are sufficient (and on reviewing recent copies of the the *British Heart Journal* I am pleased to see that this is generally the case). Not only is multiple authorship generally unnecessary, it is more likely to foster scientific sloppiness as occurred in this case.

Unfortunately the editorial was simultaneously published in both the *British Heart Journal* and the *British Journal of General*

Practice, thus compounding the errors. This letter is critical not only of the authors but also of the Editorial Board of both journals so sadly I imagine that neither will publish it. I would love to be proved wrong.

J J MURPHY
Memorial Hospital,
Hollyhurst Road,
Darlington,
Co Durham DL3 6H

- 1 Colquhoun MC, Waine C, Monaghan MJ, Struthers AD, Mills PG. Investigation in general practice of patients with suspected heart failure. *Br Heart J* 1995;74:335-6.
- 2 Murphy JJ, Frain JPJ, Bossingham CM. "Open access" to echocardiography for suspected heart failure: does it work? *Br Heart J* 1995; 73(suppl 3):P39.
- 3 McMurray J, Dargie HJ. Trends in hospitalisation for chronic heart in the United Kingdom. *Eur Heart J* 1992;13(suppl):350.
- 4 McMurray J, McDonach T, Morrison CE, Dargie HJ. The growing problem of heart failure in Scottish hospitals. *Br Heart J* 1993; 69(suppl):P73.
- 5 McMurray J, Hart W. The economic impact of heart failure on the UK National Health Service. *Eur Heart J* 1993;14(suppl):133.
- 6 McMurray J, McDonach T, Morrison CE, Dargie HJ. Trends in hospitalization for heart failure in Scotland 1980-1990. *Eur Heart J* 1993;14:1158-62.
- 7 McMurray J, Hart W, Rhodes G. An evaluation of the cost of heart failure to the National Health Service in the UK. *Br J Med Econom* 1993;6:99-110.
- 8 International Committee of Medical Journal Editors. Uniform requirements for manuscripts submitted to biomedical journals. *BMJ* 1991;302:338-41.

The Editor replies:

We are always willing to consider and publish constructive criticism. Dr Murphy raises interesting points about the reference lists of scientific papers. The object of a reference list is to enable the reader to backtrack to primary sources of data. In the 20 references cited by Colquhoun and his colleagues this was achieved—the original papers were all cited in a manner which allowed them to be found. Complete accuracy is rare and overall error rates of 31% have been found in other

journals.¹ In this context the minor errors in six of the 20 references in the article by Colquhoun *et al* are not exceptional; though they are always regrettable.

Who is responsible for the accuracy of references? Until 1985 my predecessors as editors had the luxury of a reference checker who checked every reference in every paper. The business ethos of "efficiency" which has permeated every aspect of modern life from scientific publishing to healthcare abolished this post and threw the burden of the accuracy of references fairly and squarely on our authors. In defence of Colquhoun and his colleagues, their errors—such as missing an author's second initial—are not major. If the original source can be identified the reference has served its purpose.

A more fundamental point about references is whether they accurately reflect the content of the original paper; again this is the author's responsibility. A classic example of such a miscitation are the papers which cite death from lysergide (LSD) overdose.² The patient described in the original report was Tusko, an elephant, given 297 mg of LSD via a rifle bullet into the gluteal muscle. This is hardly a fair comparison when 100 µg of LSD is the hallucinogenic dose in humans.

Dr Murphy also questions the validity of the multiple authorship of the editorial. The criteria of authorship rightly include an intellectual input into the content. I have examined the voluminous correspondence relating to the editorial. It is clear this criterion was met. When the subject of a review is contentious, crosses disciplines, and involves the business management of the National Health Service I fail to see how one author could have written an authoritative review.

M J DAVIES

- 1 Hobma SO, Overbeke AJ. Fouten in literatuurverwijzingen in het Nederlands Tijdschrift voor Geneeskunde. *Ned Tijdschr Geneesk* 1992;136:637-41.
- 2 Dunn J. Always check the references. *BMJ* 1996;312:292.