

## 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).*

### Mitral valve hypoplasia in children with isolated coarctation of the aorta

SIR,—Venugopalan *et al* concluded that, compared with controls, patients with coarctation of the aorta have relative hypoplasia of the mitral valve which is likely to be more pronounced in patients with mitral diastolic murmurs.<sup>1</sup> Unfortunately, they do not mention our previous study in which we found that patients with mitral diastolic rumble and coarctation of the aorta have minor abnormalities of the mitral valve or minimal mitral stenosis that significantly increase the rapid ventricular filling and pressure half times and decrease the mitral valve area.

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1 Venugopalan P, Bu'Lock FA, Joffe HS. Mitral valve hypoplasia in children with isolated coarctation of the aorta. *Br Heart J* 1994; 71:358-62.

2 Bruno E, Juaneda E, Moreyra E, Alday LE. The mitral mid-diastolic rumble in isolated coarctation of the aorta. Cross-sectional and Doppler echocardiographic study. *J Cardiovasc Technol* 1990;9:143-6.

### Please Sir! GPs treat cardiac failure too!

SIR,—General practitioners did not feature in your supplement on diuretics in heart failure,<sup>1</sup> yet mild to moderate cardiac failure is essentially a general practice diagnosis. In a recent postal survey<sup>2</sup> of 1897 members of the Irish College of General Practitioners most GPs reported that they treat most patients with heart failure without hospital referral.<sup>3</sup> Only 14% would refer more than 50% of patients, and those who were qualified longer were more likely ( $P < 0.05$ ) to refer to hospital. Cardiac failure is seen as a condition of the older age group, with most cases presenting between 65 and 75 (66%). Most patients are in New York Heart Association grade 1 (50%) or grade 2 (44%) when they attend initially.

Almost all GPs (89%) attempt first line therapy in general practice and only 51% would refer without at least two changes of therapy. GPs believe that drug treatment usually (in 90% of cases) controls symptoms and such control is the priority for

70% of practitioners. GPs are less sure that drug treatment prolongs life (65%) and prolonging life is the priority for only 18%. Those more recently qualified ( $P < 0.01$ ) and those who are vocationally trained ( $P < 0.01$ ) were less likely to believe that drug treatment prolongs life. Differences in beliefs about the value of drug therapy are reflected in treatment aims. More of those who were qualified longer were more likely to cite prolonging life as their main priority ( $P < 0.001$ ) and fewer of those who were vocationally trained ( $P < 0.05$ ). In addition, those who were vocationally trained were less likely to initiate treatment with the aim of delaying progression of the disease ( $P < 0.05$ ).

In contrast, control of symptoms was the priority of those most recently qualified ( $P < 0.001$ ) and those vocationally trained ( $P < 0.01$ ): 80% of those who qualified after 1980 compared with 69.8% of those who qualified from 1970 to 1979 and 58.2% of those who qualified before 1970 cited symptomatic control as their main treatment priority. Of those vocationally trained 76% gave symptomatic control as their main priority compared with 64% of those who were not.

Side effects are a major problem and 73% reported that more than 10% of patients suffer from side effects. Not surprisingly this is reflected in compliance: 70% of practitioners believed that more than 10% of patients have poor compliance.

Clearly GPs have considerable experience and expertise in the management of mild to moderate cardiac failure and this experience is quite different from that of hospital specialists. There is a need to share community and hospital experience and develop guideline and protocols that recognise this continuity of care.

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1 Taylor SH, ed. Diuretics in heart failure. *Br Heart J* 1994;72, (suppl Dec).

2 MacAuley DC, ed. Cardiac failure *Forum* (Journal of Irish College of General Practitioners) 1994;3 (suppl).

### Peripheral vascular disease: consequence for survival and association with risk factors in the Speedwell prospective heart disease study

SIR,—We were interested in the findings of Bainton *et al* that a raised white cell count predicts the development of intermittent claudication.<sup>1</sup> An epidemiological study also found a correlation between a raised white cell count and a significant risk of myocardial infarction and stroke.<sup>2</sup>

It is generally accepted that massive tissue ischaemia followed by reperfusion has an adverse effect on the systemic vascular endothelium, particularly the pulmonary microcirculation.<sup>3</sup> Evidence suggests an important role for oxygen-derived free radicals, activated neutrophils, and endothelial mediators in this injury, resulting in a systemic increase in vascular permeability. This may be quantified by a local increase in renal permeability, which is reflected by a change in urinary protein excretion—microalbuminuria.<sup>4</sup>

We have suggested that patients with

claudication undergo a series of similar less severe ischaemia-reperfusion injuries with activation of the above mechanisms. This may have an adverse effect on cardiovascular morbidity and mortality in these patients. In support of this hypothesis we found an increase in neutrophil activation, lipid peroxidation, and a rise in urinary albumin excretion after exercise in patients with claudication.<sup>5,6</sup>

Recently we found a decrease in neutrophil deformability, suggestive of activation, and a highly significant rise ( $P < 0.001$ ) in thromboxane B<sub>2</sub> concentrations after exercise in patients with claudication. No change was found in the control group and concentrations of thromboxane B<sub>2</sub> at rest were significantly lower in the controls. The results support the concept that intermittent claudication results in a series of repeated ischaemia-reperfusion injuries leading to neutrophil activation and increase in systemic vascular permeability. These events seem to play a part in atherogenesis, and we suggest that this may contribute to the excess cardiovascular mortality found in these patients.

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1 Bainton D, Sweetnam P, Baker I, Elwood P. Peripheral vascular disease: consequence for survival and association with risk factors in the Speedwell prospective heart study. *Br Heart J* 1994;72:128-32.

2 Ernst E, Hammerschmidt DE, Bagge U *et al*. Leukocytes and the risk of ischemic diseases. *JAMA* 1987;257:2318-24.

3 Welbourn CRB, Goldman G, Paterson IS *et al*. Pathophysiology of ischaemia reperfusion injury: central role of the neutrophil. *Br J Surg* 1991;78:651-5.

4 Gosling P, Shearman CP. Increased levels of urinary proteins: markers of vascular permeability? *Ann Clin Biochem* 1988;25 Suppl:150s-1s.

5 Hickey NC, Gosling P, Baar S, Shearman CP, Simms MH. Effect of surgery on the systemic inflammatory response to intermittent claudication. *Br J Surg* 1990;77:1121-4.

6 Shearman CP, Gosling P, Gwynn BR, Simms MH. Systemic effects associated with intermittent claudication. A model to study biochemical aspects of vascular disease? *Eur J Vasc Surg* 1988;2:401-4.

### Direct access exercise electrocardiography: a new service that improves the management of suspected ischaemic heart disease in the community.

SIR,—The paper by McClements *et al* on direct access exercise testing (*Br Heart J* 1994; 71:531-5) is surely incorrectly titled. A new service that *alters* the management of suspected ischaemic heart disease would be appropriate but to suggest that it *improves* the management — I think not. As a result of the open access facility more than half of the patients with chest pain thought to be due to coronary artery disease who had an abnormal exercise test were not referred for specialist examination and advice, thereby being deprived of access to two of the three available treatment options. Indeed apparently more than 10% of these patients received no treatment at all.

In the current environment where quantity rather than quality of management seems to be the important factor perhaps I