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. 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).

Side effects are a major problem and 73% reported that more than 10% of patients suffer from drug 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 guidelines and protocols that recognise this continuity of care.

Please Sir! GPs treat cardiac failure too!

Sir,—General practitioners did not feature in your supplement on diuretics in heart failure, yet mild to moderate cardiac failure is essentially a general practice diagnosis. In a recent postal survey9 of 1897 members of the Irish College of General Practitioners most GPs reported that they treat most patients with heart failure without hospital referral.6 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 (65%). 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 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.1 An epidemiological study also found a correlation between a raised white cell count and a significant risk of myocardial infarction and stroke.2 It is generally accepted that massive tissue ischaemia followed by reperfusion has an adverse effect on the systemic vascular endothelium, particularly the pulmonary microcirculation.3 Bainton et al suggest that 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.4 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 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.5

Recently we found a decrease in neutrophil deformability, suggestive of activation, and a highly significant rise (P<0.001) in thromboxane B2 concentrations after exercise in patients with claudication. No change was found in the control group and concentrations of thromboxane B2 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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