Modern management of heart failure: education as well as medication

See page 139, doi:10.1053/euhj.2001.2712 for the article to which this Editorial refers

Heart failure is a disease of epidemic proportions with three quarters of patients afflicted dying within 3 years[1]. Aside from the appalling prognosis of the condition patients suffer greatly, as does the purse of the national health budget. These patients are admitted time and time again for prolonged periods for worsening heart failure, have multiple co-morbidities and often lack social support due to their advanced age. They use health care resources relentlessly and still remain severely limited by their disease. The organization of heart failure services is fragmented and the quality of care delivered highly variable. Pharmacological management continues to be poor with suboptimal numbers of patients being on ACE inhibitors, beta-blockers and spironolactone, in spite of the overwhelming evidence for their benefit. The reasons for this are complex, but a likely contributing factor is the diffusion of responsibility between cardiologists, geriatricians, general physicians, nurses, and GPs, with little collaboration as regards planning individual therapy.

Studies are now emerging about the benefits of non-pharmacological therapy, based on education and support, for heart failure patients discharged from hospital. Interventions ranging from intensive specialist follow-up in clinic for subgroups[2] to multi-disciplinary home-based interventions involving specialist heart failure nurses and pharmacists have shown that education of patients about the importance of regular weight surveillance, salt restriction, exercise and compliance is vitally important, as is encouraging them to take responsibility for recognising a deterioration in their symptoms and seeking the appropriate help. These interventions have been shown not only at total readmissions rather than those solely due to worsening heart failure.

The study by Doughty and colleagues in this issue[4] is concerned about the treatment of the real heart failure patient; in other words, the elderly patient usually managed in the community who has no input from a specialist clinic, and little social support. The investigators acknowledge the cost of heart failure clinics and their limited provision in tertiary centres and therefore propose a more practical model for non-pharmacological treatment of heart failure. They combine the resources of primary and secondary care, using nurse-led education and support, with the patient’s general practitioner and cardiologist sharing follow-up visits. Their aim was to reduce readmissions and mortality, and to improve quality of life.

The study was a well designed randomized controlled trial of 197 patients admitted with heart failure that received either intervention or usual therapy and were followed-up over a period of 12 months. The study was actually prematurely stopped. A provisional estimate of 180 patients per group was made but the final sample size was calculated after 100 patients had been followed for 6 months. The event rate was found to be higher than expected but there was no difference between the two groups for the combined primary end-point of death or readmission. Projection of the observed effect size suggested that an order of magnitude of more patients would have been required to achieve a result reaching statistical significance, but even this would probably have had little clinical significance. The follow-up of the patients already recruited was completed to allow data for total admissions and quality of life to be analysed. Confirming the poor prognosis of patients with heart failure, 22% of the group died during the study period, and 62% were admitted to hospital. There was a significant decrease in all-cause admissions, and those specifically for heart failure, in the intervention group, with 120 patients being admitted vs 154 of controls. Importantly, the intervention programme led to a decrease in bed-days for admissions due to any cause. Physical quality of life scores also increased significantly in the intervention group.

It is interesting that the benefit afforded by the intervention did not become apparent until after the first admission to hospital. In fact, there was a slightly greater first re-admission rate in the intervention
group. It may be that significant problems were picked up earlier in the patients who were more intensively followed-up. The authors suggest that because patients did not receive advice while they were still on the ward, but often up to 7 days after discharge, there may have been a time lag before the benefits of home-based interventions were seen. It is interesting that most studies of this sort follow-up patients for only 6 to 12 months. There may well be long-term benefits of intensive management and it is certainly feasible that mortality may be reduced, albeit modestly, by careful attention to optimal medical management, patient compliance, and managing co-morbidities effectively. This study suggests a trend in that direction.

It is notable that only a third of re-admissions were due to worsening heart failure. This serves to illustrate the other problems faced by these patients, who often have co-existing ischaemic heart disease, diabetes, and COAD. It also highlights the fact that they are elderly and often admitted for falls and social reasons. One of the benefits of more intensive management of heart failure is that circumstances potentially precipitating a prolonged admission can be identified and managed promptly. This trial confirms the findings of others of its sort in showing that structured intervention, whether it be by nurse-led home-based intervention or specialist clinic, is beneficial in heart failure patients, at least in reducing the frequency of re-admissions and improving quality of life. It is an important trial in that the study patients were typical of the average heart failure patient. It also confirms the importance of the role of the GP in managing these patients and shows that a sensible model of shared care between the primary and secondary sectors is both feasible and useful.

We now have both pharmacological and non-pharmacological heart failure management strategies that can improve patients’ wellbeing. The challenge is to implement these systematically, doing the educating as well as the medicating.

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References

The heart in thalassaemia

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Thalassaemia is a monogenetic disorder affecting globin chain synthesis[1] with a heterozygote frequency varying from 3 to 30% in high-risk populations. In the U.K. there are approximately 800 transfusion dependent patients with homozygote \( \beta \)-thalassaemia and it is estimated that there are 30 000 to 60 000 births per year worldwide with the condition[2]. Adoption of transfusion regimes, followed in the 1970s by the use of chelation with desferrioxamine[3], has meant that survival into adulthood can now be expected for the majority of affected individuals.

Nevertheless, even in countries, such as the U.K., where treatment with desferrioxamine has been available, there remains a dramatic rate of accelerated mortality and morbidity beginning in the teenage years and leading to a 50% mortality before the age of 35[4]. Acute iron overload is toxic to the heart[5] and in the syndromes of chronic iron overload the...