

the performance of a myocardial revascularisation procedure (percutaneous transluminal coronary angioplasty or coronary artery bypass grafting) indicates that advanced coronary atherosclerosis is present. Provision of optimal care for these coronary patients in the 1990s includes identification of the specific needs of that individual patient for the prescriptive exercise training and education and counselling to help to remedy the disease. Recommendations for rehabilitative care may include a structured supervised program, exercise at home or unsupervised exercise, counselling by physicians and/or other health professionals, or the use of contemporary technological aids such as videotapes to guide home exercise or computer-interactive educational programs to provide information and counselling.¹ Exercise training as prescription rather than proscription is often the point of entry to rehabilitative care that facilitates adoption of health-related behaviours.

Education and counselling involve not only the provision of information but also training in the skills needed to improve health-related behaviours, practising these skills, and reinforcement of successful changes in coronary risk status. Appropriate provision of cardiac (coronary) rehabilitation includes selection of the relevant components and the method of delivery for an individual patient, definition of the desired outcome, and delineation of the time frame in which this outcome is expected to occur.

Exercise training, designed to decrease activity-induced symptoms and improve functional capacity, should be evaluated by this outcome measure, rather than by any effect of exercise on coronary risk reduction, psychosocial status, return to work etc. Although improved survival was a goal of exercise rehabilitation in the early 1970s, contemporary medical and surgical treatments have improved outcome so much that any added intervention is unlikely to improve survival further. The benefits of supervised and unsupervised exercise have not been compared in a randomised fashion, but for low risk patients unsupervised modest intensity exercise training may be more easily adhered to than the higher intensity supervised exercise regimens, which produce more musculoskeletal discomfort and are less convenient; this requires evaluation. As noted by Dr Lipkin (*British Heart Journal* 1991;65:237-8) the availability of risk stratification procedures and the documented efficacy of low intensity exercise permits this physician-directed exercise rehabilitation outside a structured supervised program. "Formal" exercise programmes (that is, individually prescribed exercise with instructions for implementation) are appropriate for most coronary patients. However, supervised and particularly electrocardiographically monitored exercise rehabilitation should be limited to selected patients.

Improved psychological function as an outcome of rehabilitative care should be assessed only among coronary patients who have identified psychosocial problems and for whom specific interventions are recommended. It should not be expected to come simply from participation in an exercise regimen.

Unfortunately, the "usual" supportive care may not include adequate multifaceted education and counselling, which often require considerable time and specialised knowledge—teaching dietary modification is a good example of this. However, the specific goals set for each educational component can

provide a standard against which to evaluate outcome.

Perhaps analysis of the benefits of cardiac (coronary) rehabilitation are hampered less by the heterogeneity of the patients than by the heterogeneity of the questions asked.² An optimal regimen (rather than an inflexible programme) of rehabilitative care should be defined by the patient's physician, in consultation with the patient (and programme staff if a structured supervised programme is chosen). If suitable rehabilitative services are selected and the desired mode of implementation and expected outcome are defined for each component, the validity and efficacy of rehabilitative interventions can be assessed.

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- 1 Wenger NK. Rehabilitation of the coronary patient: A preview of tomorrow. *J Cardiopulmonary Rehabil* 1991; 11:93.
- 2 Wenger NK, Alpert JS. Rehabilitation of the coronary patient in 1989. *Arch Intern Med* 1989;149:1504.

SIR,—Dr Lipkin quite rightly defines cardiac rehabilitation "as a process by which patients with cardiac disease are restored to their optimal physical, medical, psychological, social, emotional, vocational and economical status" but in later remarks he seems to equate this process to one of physical training. Is it realistic to think that physical training alone can bring it about? Obviously it is not. Organised motor activity it is quite properly called "physical exercise" or, when it is designed to induce specific biological changes, "physical training". But this is a far cry from rehabilitation, which, as Lipkin himself reminds us, is a complex combination of medical and non-medical measures rendered much better by a term such as: "prognostic evaluation and long-term care". In other words the focus of rehabilitation is the chronically ill patient.

Chronic heart failure is a case in point. At a few cardiac rehabilitation units much of the cardiologists' time is taken up with the care of patients awaiting transplantation—care that encompasses pharmacotherapy, detection and treatment of metabolic abnormalities, nutritional support, regimens to prevent physical deconditioning, prophylaxis against infections, support replacing temporary loss of physiological functions (ultrafiltration, mechanical ventilation) attention to the sleep-wakefulness rhythm, detection and elimination of any possible causes of disease progression, the caring and compassionate counselling which can be of vital importance in many cases.

I do not know whether "rehabilitation" is a fitting term to cover the range of care from the soft follow up of uncomplicated post-infarct patient on a secondary prevention programme and the semi-intensive care of chronically, critically ill patients and I am certainly not claiming that such wide-ranging, complex undertakings should be simply assigned to the present rehabilitative facilities.

However, we have to recognise that new realities, such as longer life expectancy and effective treatment, together with the chronic nature and long duration of most cardiac diseases (ischaemic heart disease, myocardial pathologies, "essential" hypertension and so

forth), tend to increase their prevalence. The course of these diseases, mostly silent until an explosion of symptoms with often irremediable damage suggests that the logical approach is to make every effort to prevent acute episodes—that is, by controlling disease progression by careful chronic care and by managing recovery after unprevented episodes in order to preserve the patient's autonomy and quality of life. The health service as at present structured, focused on hospitals, is concerned primarily with resolving diagnostic problems and coping with emergencies rather than with the systematic follow up of the chronic patient. In most countries rehabilitation is in embryo and still lacks a coordinated professional approach to the chronic cardiac patient's problems, but it is the first serious attempt at a comprehensive and permanent approach to these patients.

Several current papers refer to rehabilitation as "physical training", I believe this to be an oversimplified and rather confusing view that should not be reinforced in editorials written by authoritative persons for authoritative journals.

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

SIR,—I agree with Professor Tavazzi's comments. We do tend to concentrate on physical rehabilitation because changes in effort tolerance are more easy to measure than the psychological and emotional responses to the treatment, which often improve with improvement in physical exercise capacity. Whether one wishes to call the post-hospital follow up and treatment of patients "rehabilitation or prognostic evaluation and long term care" is arguable. I agree that the supportive care many patients require includes "multi-faceted education and counselling". An optimal regimen tailored to the patient's requirements would be ideal as I mentioned in my editorial, but as Douglas Chamberlain and his colleagues recently commented it is obvious that cardiological resources in the United Kingdom are so restricted that at present this ideal might not be met.¹

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- 1 Chamberlain D, Pentecost B, Reval K, Stevens J, McC Boyle D, Cobbe S, Ballantyne D, Shaw T. Staffing in cardiology in the United Kingdom 1990: sixth biennial survey: with data on facilities in cardiology in England and Wales 1989. *Br Heart J* 1991;66:395-404.

BOOK REVIEW

Cardiomyoplasty. Eds Alain Carpentier, Juan Carlos Chachques, and Pierre Grandjean. (Pp 280; \$85.00.) Mount Kisco, NY: Futura Publishing Company, 1991. ISBN 0-87993-395X.

Two of the editors of this book, Alain Carpentier and Juan-Carlos Chachques, surgeons from Hôpital Broussais in Paris reported, in 1985, the first clinical use of latissimus dorsi muscle to augment the left ventricle. The third editor, bioengineer Pierre Grandjean, has made a major contribution to the pacing systems required to train and drive the transplanted and transformed skeletal muscle. Among the 50 contributors are the best known names in the field—such as the anatomist, Salmons; his surgical collaborator for many years, Larry Stephenson; and Pette who described changes in phenotype expression of muscle. The major clinical contributors to cardiomyoplasty are represented and include Magovern's group from Allegheny, and Jatene and colleagues from São Paulo, Brazil who, with the Paris surgeons have provided the major part of the world's clinical use of the technique. The monograph is authoritative, comprehensive, beautifully produced, generously illustrated, and very readable. It is based on papers presented at a Paris meeting in June 1989 at which time there were about fifty patients. Papers from another international meeting in October 1990, from the same principal authors, reviewing double the number of patients, had already appeared in April 1991 in *Seminars in Thoracic and Cardiovascular Surgery*, months before this hardback volume was released. This book may be seen as a landmark but it does illustrate the difficulties, acknowledged by Alain Carpentier in his insightful foreword, of publishing in a rapidly changing field.

TOM TREASURE

The title reviewed here is available from the BMJ Bookshop, PO Box 295, London WC1H 9TE. Prices include postage in the UK and for members of the British Forces Overseas, but overseas customers should add 15% to the value of the order for postage and packing. Payment can be made by cheque in sterling drawn on a UK bank, or by credit card (MasterCard, VISA, or American Express) stating card number, expiry date, and your full name.

BRITISH CARDIAC SOCIETY NEWSLETTER

The last newsletter gave the up to the minute news of completion of our purchase of our own property at 9 Fitzroy Square. By the time this appears we should be well settled in the new house. It is a fine Georgian building ideally suited to the new and expanding activities of the society. The offices of the *British Heart Journal* will share the premises—an ideal arrangement given our close working relationship. Our affiliated groups and societies have all expressed an interest in making use of the new facilities. We have rooms large enough not only for all the committees but also for our planned teach-ins, and for workshops if plans for these are approved. Kitchen facilities are available, so that catering on the premises becomes a possibility. We hope that the house will become a well integrated headquarters for all major activities relating to the British Cardiac

Society. To achieve this we will, of course, require additional staff. Mrs Elaine Brown (our administrator), and Mrs Jenny Lodge (our assistant administrator and bookkeeper) have coped so far with all the affairs of the society—with assistance from Sussex for secretarial work and surveys. We have enrolled a new part-time secretary in London, and further changes may follow if the workload grows. If any members of the society find themselves near Fitzroy Square, we hope they will call in: it is only minutes from the Royal College of Physicians, and from Regents Park, Great Portland Street, Euston Square, and Warren Street Underground Stations.

The meeting organised by the society on the developing internal market in cardiology and cardiac surgery was held at the Royal College of Physicians on 4 December. It was well attended with over 200 delegates; 40% were cardiologists or cardiac surgeons, 30% were managers from provider units, and 30% came from purchaser health authorities. The speakers included a regional director of public health, a health economist, five clinicians (of whom one was American), and representatives of the NHS Management Executive and the Department of Health. The initial presentations dealt with the future management of regional specialties and with modelling of treatment patterns of coronary artery disease—with economic evaluation of outcomes. The experience of three clinicians was reported, and the requirements were discussed for refining case mix and coding for effective setting of contracts. The difficulties ahead seem formidable, and the market seems likely to be managed centrally for some time to come. The meeting finished with a session looking at supraregional specialties and clinical research. Their future was linked to the research and development initiatives that are being developed by the NHS Management Executive. A full report is being prepared—and should be a valuable source of information in a difficult and new area. We will let you know later how this can be obtained.

A meeting of representatives of the affiliated groups was held at the British Cardiac Society on 29 November. Representatives from the British Cardiovascular Intervention Society (BCIS), the British Paediatric Cardiac Association (BPCA), the British Society of Echocardiography (BSE), the British Nuclear Cardiology Group (BNCG), and the British Pacing and Electrophysiology Group (BPEG) all expressed an intention for the groups to be recognised as part of the British Cardiac Society, while retaining their autonomy within the individual organisations. This position has not previously been defined in any formal way, and the word "affiliated" had been open to varying shades of interpretation. The groups will want to confirm their positions after appropriate discussions, but in the meantime they were invited to submit a statement of the support they may wish to receive from the British Cardiac Society. This task has to be undertaken with some urgency, so that we can make the best use of 9 Fitzroy Square. Possible financial support, record keeping, secretarial assistance, data collection, audit, relations with European societies, management of any subscriptions, space for small meetings and arrangements for large ones, printing, and publications—these should all be considered. The special position of the British Nuclear Cardiology Group was recognised; most of its members are not cardiologists. This was not seen as an overriding difficulty: this group can

be affiliated under the same arrangements as the other groups.

Arrangements for the Harrogate meeting are almost complete. Dr Eugene Braunwald has agreed to give the Sir Thomas Lewis lecture; Dr Lars Ryden will be the non-United Kingdom (how else these days do we say "European"?) judge for the Young Research Workers Prize; and we are planning a partners programme. Simultaneously with the young research workers presentations we will have—as an experiment—a session designed for state-of-the-art presentations designed to suit the needs of district hospital cardiologists.

We hear that some district hospital cardiologists have felt that the society does not cater adequately for their needs. If the society has shown a bias towards matters of concern to cardiologists in the major centres, this is not intentional. We believe that the impression reflects an earlier pattern of activities that were entirely appropriate when district hospitals had few specialist physicians, and that this view is increasingly outmoded. If we can do more for district cardiologists—who face so much of the burden of heart disease—then please make suggestions; they will be welcome. We do wish to see more colleagues from outside the major centres proposed for and elected to council.

New proposals for the constitution will come before the Annual General Meeting in Harrogate. Some have already been widely discussed: that council should include a representative from paediatric cardiology and that the chairman of the cardiology committee of the Royal College of Physicians and the society's own Postgraduate Cardiology Advisor should also be on council. A more recent suggestion that also seems to have much merit relates to the officers: that in future the president should serve for two years rather than three, and that the president-elect is also in post for two years. Thus there will always be five officers. While future presidents will still have a total of four years in office, the load will be more evenly spread.

The December newsletter referred to the possibility of a meeting to discuss the future of arrhythmology units, with special reference to the funding of an important growing point of cardiology. Proposals put to the cardiology committee earlier in 1991 were not adopted, pending further discussions among interested parties: the society in cooperation with BPEG is clearly an appropriate forum for these. A provisional date of 10 March has now been agreed. We believe that representatives from the Department of Health may be willing to join us.

The British Cardiac Society and the Society of Cardiothoracic Surgeons wish to implement a new scheme to make information cards available to all patients with replacement heart valves (newsletter, September 1991). This would be based on the United Kingdom valve registry organised by Ken Taylor at Hammersmith Hospital. We are hopeful that the valve manufacturers will be willing to provide the modest support needed for this project, though negotiations have taken longer than we expected. In the meantime, Shiley have arranged that the Medic Alert Foundation should cooperate with our societies to make bracelets available to any patients with the Björk-Shiley convexo-concave valves that may be at risk of strut fracture. A letter about free registration with Medic Alert has been sent to at least one cardiologist (or physician with an interest in the specialty) in every hospital that may treat