Cardiac rehabilitation taking a centre stage in British cardiology

A COMMENTARY ON THE SIGN GUIDELINE ON CARDIAC REHABILITATION, AND LINKS BETWEEN THE BRITISH ASSOCIATION FOR CARDIAC REHABILITATION AND *THE BRITISH JOURNAL OF CARDIOLOGY*

Cardiac rehabilitation is the one area of cardiological practice that exemplifies the need for good multidisciplinary teamwork if a good service is to be delivered. With the publication of the National Service Framework (NSF) for Coronary Heart Disease (CHD), the secondary and primary care divide is slowly being eroded to produce a seamless model of care for cardiac patients. It is also the one sector of cardiac patient care that demands most active participation from patients. For some time rehabilitative cardiology has been regarded as a 'Cinderella' interest, with few centres having direct input from consultant cardiologists.

The publication of the Joint British recommendations on prevention of CHD in clinical practice[1] has made it no longer acceptable to segregate lipid-lowering therapy from the treatment of cardiac ischaemic syndromes, and risk-inducing conditions, such as hypertension and diabetes. Indeed, it is no longer acceptable for the cardiac surgeon or cardiovascular interventionist to perform the operation and leave preventative measures to chance or to 'someone else'. Rehabilitative and preventative cardiological practice must now take an equivalent position at centre stage of patient care with as much emphasis and support as is given to coronary care, angiography, cardiac surgery and intervention. Specialist registrar training in cardiology should now include appropriate components of prevention and rehabilitation as recognised subspecialties if this message is to be adopted widely in the UK.

The British Association for Cardiac Rehabilitation

It is against this background of paradigm shifts that *The British Journal of Cardiology* and the British Association for Cardiac Rehabilitation (BACR) jointly announce in this issue a formal link between the two organisations. The journal will carry regular reports on the BACR's activities; and all BACR members will receive a regular copy of the journal.

The BACR is a national multidisciplinary association for cardiac rehabilitation in the UK. It was created to represent and serve the interests of all professions involved in the provision of cardiac rehabilitation with the following aims and objectives:

- To undertake and promote, with respect to diseases of the heart and circulation, all or any of the following, by such means as are charitable, and in each case for the benefit of the public:
  - the prevention of disease of the heart and circulation and the relief of sickness of persons suffering from such diseases, by promoting prevention, rehabilitation and health education
  - the dissemination of results of medical and scientific research
  - the advancement of education and training and the promotion of best practice in relation to the treatment of such diseases.

It is evident the BACR represents not only rehabilitative cardiology, but also preventative cardiology. This standpoint is in keeping with the WHO's description of cardiac rehabilitation which states: "… the sum of activities required to influence favourably the underlying cause of the disease, as well as to ensure the patients the best possible physical, mental and social conditions, so that they may, by their own efforts, preserve or resume when lost, as normal a place as possible in the life of the community".[2]

In the British model of healthcare delivery (through the NHS), this WHO definition encompasses not just secondary prevention but also primary prevention of cardiac disease since everyone in the country is registered with a general practitioner and, therefore, by definition, everyone is a patient of a primary care physician or group practice.

Historically in most areas of medical practice, an imbalance in the doctor-patient relationship has developed, with the patient taking a relatively passive role accepting advice, medicines or procedures that are recommended by the doctor. The delivery of healthcare is now inexorably moving towards an era where less paternalism is the rule. Cardiac rehabilitation is an arena where it is now clearly understood that we, the healthcare professionals, are present to help patients "resume as normal a place as possible in the life of the community". The objective is enablement and empowerment of patients. This concept is inherent in the WHO definition for cardiac rehabilitation and clearly demands commitment from patients.

SIGN guideline on cardiac rehabilitation

With the modern clamour for evidence-based medical prac-

tice (EBM), it is questioned whether there is evidence to support the view that any part of cardiac rehabilitation is beneficial to patients, and in what way is it beneficial? With this preface the Scottish Intercollegiate Guidelines Network (SIGN) guideline on cardiac rehabilitation has been drafted and published as an article in this issue (see pages 29–34),[3] following publication of the full text on the website.[4] The BACR has endorsed these full and credible guidelines.

A major problem in publishing guidelines in journals is that there is rarely enough space to cover every important aspect (with the behind-the-scene deliberations) that should be included. Modern guideline drafting is seriously constrained by the need to be evidence-based, so much so that items without high-level 'evidence' can be viewed with disdain; or worse, some would advocate that these should be disapproved. Strength of recommendation is often questionably assumed to be proportional to availability of high-grade 'evidence'. Instead of merely accepting caricatures about EBM,[5] we should consider whether higher principles govern recommendation making than currently available EBM dogma. Through positive, constructive consideration, better practice can be advanced.

Evidence-based medicine versus practice

Inevitably, there is a gulf between evidence-gatherers and practitioners. What may be considered top-level or high-grade evidence may not necessarily constitute the strongest recommendation for clinical practice. For example, the largest of all clinical trials, ISIS-4, which included nearly 60,000 patients in the study, concluded that angiotensin-coverting enzyme (ACE) inhibitor use is significantly beneficial (2p=0.02) when given to unselected patients after acute myocardial infarction.[6] But clinicians have not adopted this high-level evidence into practice and remain selective in prescribing these medicines to individual patients. High-grade evidence does not necessarily lead to irrefutable recommendation for clinical practice.

What about practices with low-grade or no evidence? Should such non-evidence-based practices be prohibited? For example, when a patient presents with tension pneumothorax, because there is no randomised controlled trial (RCT) or evidence from meta-analyses, should a responsible casualty officer be forbidden from inserting a chest drain? Similarly, when a patient presents with acute left ventricular failure with frothy sputum spilling out orally, should the current practice of giving such a patient oxygen, a bolus of intravenous loop diuretic and nitrates be discouraged because there is no RCT evidence? The answer to both questions is a definite 'no'. The reasons are two-fold.

First, it is unethical to conduct such a trial in the modern era – no ethical committee would condone the withholding of a beneficial treatment merely to conduct a clinical trial. Second, the evidence is actually available, not as published articles in peer-reviewed journals but indelibly imprinted in the minds of doctors who have gained sufficient experience in the casualty department or medical emergency room. If these conventional treatments are withheld from either the tension pneumothorax or severe acute left ventricular failure patient, the likelihood is that four hours later, the same casualty officer will be called either to certify death or to resuscitate a moribund patient. Alternatively, if the treatment were given, then four hours later during a ward round, the medical officer would probably find the patient sitting up, possibly chatting and tucking into breakfast. We do not need to conduct a clinical trial of n=60,000 patients to produce evidence that the treatment works. N=1 suffices. Large is not necessarily beautiful. Hence the dogma that "no RCT evidence means no grounds for strong recommendation" does not necessarily hold.

There are different criteria for judging what constitutes strong clinical recommendations. It is not necessarily high levels or high grades of RCT, or evidence from meta-analyses. Once this is accepted, we must ask what other principles operate in categorising the strengths of clinical recommendation? Discussing these principles could form another article but we need to be aware that the EBM concept, of extolling data from RCT and meta-analyses as the bases for high-grade EBM dictates, is essentially utilitarian and outcome driven. We must also realise that there are more fundamental principles that underscore how medicine should be practised, including adherence to moral obligations exemplified in the General Medical Council's "Guidance on Good Practice" and the Hippocratic Oath. It is not sensible to argue whether a clinician should do his basic duty by asking: "Is there any evidence that talking to patients, explaining the diagnoses and treatment plans would improve the outcome?" Similarly, it is absurd to ask whether there is any evidence to suggest that availability of resuscitation makes any difference to patient outcomes in exercise training sessions during cardiac rehabilitation. This question rather violates the basic principle of non-maleficence (first do no harm) in medical practice. In other words safety is always a priority.

A truism states that availability of high-level evidence is highly dependent on availability of funding. Not surprisingly, therefore, evidence is most plentiful pertaining to successful new pharmacological agents. Tablets are amenable to being administered as placebo, whereas placebo surgical operations are ethically unjustifiable. Thus RCT evidence is much more reliable in drug than for other forms of clinical activity. Multidisciplinary cardiac rehabilitation practices cannot be easily subjected to RCT investigations. To insist that such evidence is available for cardiac rehabilitation to the standards

demanded of drug RCT trials is equivalent to putting unnecessary stumbling blocks to the development of applied medicine.

With these caveats in mind, the clinical community should welcome, read and debate the published SIGN guideline on cardiac rehabilitation. With it, we see the first steps of rehabilitative and preventative cardiological practice joining the centre stage in primary and secondary care of cardiac patients in the UK.

References

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