

# Leading articles

## Medical education and nutrition

(see papers by Worsley and Worsley page 7 and Seal and Woodward page 11)

The beginnings of medical practice in ancient Greece, China and the Middle East were incorporative of food-health concepts and practices. Great periods, like that of the enlightenment in the west, and great figures like the physician Maimonides were characterised by the use of nutritional medicine. The development of scientific methodology in medicine featured the formal study of nutritional physiology and biochemistry. What we are now witnessing is the integration of the socio-behavioural sciences, the frontiers in food component analysis, and the new molecular biology with the nutritional sciences, for better medical practice. It is, therefore, to be expected that there will be scrutiny of medical education (1,2), as well as enquiry into the attitudes and approaches of medical graduates to see whether these contemporary developments in the food and nutritional sciences are taken into account. The papers of Seal and Woodward and of Worsley and Worsley in this issue of the Journal reflect these trends, and may contribute to them.

One may well ask then, what should be the objectives of nutrition in medical education? They probably should be to provide the medical practitioner with:

- (a) the ability to recognise nutrition-related health problems and to anticipate them by way of risk factor assessment;
- (b) the ability to establish what the food intake, energy balance and essential nutrient status of an individual are;
- (c) the skills required for (a) and (b), or with the provision of such information by others, to make nutritional diagnoses (3-5) taking into account the wide-ranging dimensions of a patient's health status; and,
- (d) the ability to plan overall patient management in a way that includes the nutrition aspects, but allows for the relative personal and medical priorities of patients.

It is generally agreed that the key elements which remain rather deficient in the medical education process are knowledge of community food habits, food science and technology, and clinical nutrition decision making (2). It is pleasing to note that the Tasmanian medical school approach, in an elective course, has paid particular attention to examples of clinical nutrition decision-making.

More health care professional students, not least medical students, look forward to and enjoy experiential, problem-solving learning. It was for this reason that the International Union of Nutritional Sciences and the World Health Organization encouraged the development of a patient study approach and manual *Patient Problems in Clinical Nutrition*(4). In this way teacher and student can learn together, and resource material can be close at hand. But bed-side or ambulatory care teaching on clinical nutrition remains the best

way of ensuring a sensible, integrated approach to nutrition in patient care—provided that the broader nutritional epidemiological basis is available. Thus, nutrition-sensitive clinical epidemiology is also required in the medical curriculum (and in post-graduate medical education).

One of the conclusions of Worsley and Worsley (this issue) is that general medical practitioners 'may be willing to break out of their one-to-one counselling role into other forms of community involvement, given adequate support from government'. This is an exciting possibility, but the economic structures will have to be carefully developed, whether as part of the 'community physician' or 'public health doctor' role or as part of the 'health maintenance' approach.

At the individual patient level, the medical graduate must remain well-trained to cope with the complex interactions between food, nutrition-related disease, and non-nutrition-related health problems. Too often, food and health are viewed in simple terms reflecting the current collective public health nutrition wisdom. Individual patients usually require another level of sophistication, which is not to say that public health nutrition is an easy business!

Considerable advance is being made in the systematisation of health promotion as a discipline. Downie, Fyfe and Tannahill (6) have recently written skilfully, although often controversially, about the models and values in health promotion. Nutritionists are familiar with dietary guidelines as the consensus on current food-health knowledge which provides the basis for nutritionally-relevant health promotion. Worsley and Worsley demonstrate that New Zealand general medical practitioners are convincingly supportive of the ideas on such guidelines and interested in acting upon them. One would want this to happen in a way which allows for ongoing scientific review of the guidelines and critical analysis of the differences in individual as opposed to community-wide application of them.

More and more health care professionals find it advantageous to work closely with each other in teams, usually to the patient's benefit. The change is so rapid here that it is worth remembering what is also required and what might be possible:

- (a) to integrate and minimise fragmentation of patient care;
- (b) to avoid wearisome, time-consuming, and resource-wasteful cross-referral for the patient;
- (c) to ensure that clear, concise and well-documented communication occurs between health care professionals—as far as possible involving the patient by way of a personalised medical record;
- (d) in a way that primary responsibility, which will vary from patient to patient, is accorded to one or other health care professional; and,
- (e) to record due respect and dignity to both the patient and to others in the health care team.

For the patient, the application of these concepts and precepts is as important as the acquisition of a nutrition-health knowledge.

Perhaps the most important aspect of medical education in nutrition, as in other areas, is to ensure that the limits of one's knowledge and skill are appreciated and that furtherance of the education process is forever required, based on an awareness of a genuinely scientific nutrition literature.

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## References

1. Boulton AJ, Wahlqvist ML, eds. Nutrition in medical education. *Med J Aust* 1989;151(special supplement).
2. Wahlqvist ML, Isaksson B. Training in clinical nutrition: undergraduate and postgraduate medical education. *Lancet* 1983;2:1295-7.
3. Gracey M, Hetzel B, Smallwood R, Strauss B, Tasman-Jones C, Wahlqvist ML. Responsibility for nutritional diagnosis: a report by the nutrition working party of the Social Issues Committee of the Royal Australasian College of Physicians. London: Smith-Gordon & Company Ltd, 1989.
4. Wahlqvist ML, Vobecky JS. Patient problems in clinical nutrition: a manual. London: J Libbey and Company Ltd, 1987.
5. Wahlqvist ML, Strauss B. Nutrition diagnosis and management in general practice. Sydney: Kellogg (Aust) Pty Ltd, 1989.
6. Downie RS, Fyfe C, Tannahill A. Health promotion: models and values. Oxford: Oxford University Press, Oxford Medical Publication, 1990.

## Food allergy and rheumatoid arthritis

(see paper by H.M. Buchanan, page 16)

It is not uncommon in clinical practice for patients with rheumatoid arthritis to ask whether food allergy might be causing their joint disease, and whether a change of diet might help. The article by Buchanan in this issue of the *Journal* provides a timely overview of the current literature in this field, and should be of interest to all those who deal with rheumatological patients.

Diet could play a part in rheumatoid arthritis in several ways (1). Firstly, inflammatory and immune responses can be influenced non-specifically by certain nutritional factors such as total energy intake and fatty acid composition. However evidence so far does not suggest that changing these parameters is of practical value in the majority of patients.

Secondly, certain individuals may experience idiosyncratic reactions to specific foods. Here it is important to draw a clear distinction between true allergies and other forms of intolerance. The term 'allergy' should be reserved for immunological reactions. Clinical food allergy, mediated by IgE antibodies, is principally a problem of infants and small children with a history of eczema and/or gastrointestinal symptoms. Usually only one or two foods are responsible, the most common being milk, eggs, wheat, fish or peanut, and most children grow out of these by the age of four or five.

There is no evidence that allergies of this kind are involved in rheumatoid arthritis. However, the possibility that foods might cause arthritis by triggering T cell responses or by forming immune complexes is

more plausible, and increased gut permeability could play a part here, as discussed by Buchanan. Though these hypotheses have some attraction, laboratory confirmation is lacking at present.

A more difficult problem is defining the role of food intolerance in patients with arthritis. In recent years it has been recognised that certain naturally-occurring chemicals, present in a variety of foods, as well as some food additives, can cause unpleasant symptoms in sensitive individuals. Idiosyncratic reactions of this kind are probably the most common cause of adverse food reactions in adults, but they are not mediated immunologically and should not be referred to as 'allergies'. Clinical manifestations such as recurrent urticaria, irritable bowel syndrome and headache are well recognised, but joint and muscle pains, stiffness and malaise can also occur. Such patients may experience a significant improvement in well-being once the responsible substances are identified and removed from the diet.

In most cases, musculoskeletal symptoms due to food intolerance do not have an inflammatory basis and should not be confused with rheumatoid arthritis. Rare exceptions probably do occur, and may be responsible for the occasional improvement seen in some of the studies cited by Buchanan. Skin or blood tests for allergies have not been shown to be useful in such cases, but systematic dietary elimination followed by double-blind oral challenges may be rewarding.

Unfortunately, it is all too easy for misguided enthusiasts to jump to the conclusion that 'arthritis' can be 'cured' with a change of diet, and to mistakenly attribute food-induced recurrences to 'allergies'. This must be borne in mind when evaluating the literature on diet and rheumatoid arthritis. The paper by Darlington et al. (2), cited by Buchanan, is a good example. Contrary to the impression given by the title, this was neither placebo-controlled nor properly blinded. Symptomatic improvement was seen in 10 of 44 patients, but this did not appear to correlate with any changes in laboratory indicators of inflammation. Furthermore, no details were given as to which foods were implicated or how the diet was modified. In stark contrast is the very rigorously controlled and carefully documented study of Panush et al. (3) which found two good responses amongst 26 patients placed on the widely publicised Dong diet (4).

Elsewhere, Darlington discusses the possibility that 'masking' may be responsible for causing arthritis (5). The notion of 'masked food allergies' has been popular amongst certain fringe allergists and other unorthodox practitioners since the 1940s (6), but no evidence has yet been put forward to demonstrate any immunological basis for the alleged phenomenon (7).

From a practical point of view, then, which patients should undergo dietary investigation? The literature provides no clear answer to this question. Our own approach is to look for clinical clues to the presence of food intolerance; for example, a history of mouth ulceration, recurrent urticaria or irritable bowel syndrome. The diet history is less reliable. It is easy for patients to mistakenly incriminate some foods and overlook others, and in many cases a relationship between specific foods and symptoms is not apparent at