hospitals different preparations (citing contents in g, mg, or mmol) are available. Treatment is often initiated empirically. This lack of familiarity with the drug is exemplified by the few data available in British textbooks; this contrasts with practice in North America, where intravenous magnesium has been used as an anticonvulsant in pre-eclampsia.

The mode of action of magnesium is unknown. A decrease in acute arrhythmias is unlikely to account for the decrease in mortality from acute myocardial infarction as most such life threatening arrhythmias are adequately treated in coronary care units. The increase in plasma magnesium concentration achieved in the studies cited varies but is slight. The effect that this may have on cellular processes is unknown. Basic investigations in isolated heart models have shown that a large increase in serum concentrations to about 15 mmol/l confers protection from ischaemia and improves energetic processes.[2,3] These, however, are concentrations that would cause cardiorespiratory depression in humans.

What effect a short term increase in extracellular magnesium concentration has on intracellular free magnesium is also unknown. Exchange processes across the sarcolemma are species specific,[4] and the characteristics of these in humans in physiological and ischaemic conditions are unknown. Intracellular magnesium rises during ischaemia and remains raised during reperfusion,[5,6] which may inhibit uptake of calcium by sarcoplasmic reticulum with coincidental diastolic dysfunction.[7] An increase in intracellular calcium may be deleterious, particularly during reperfusion. The effects of magnesium in acute myocardial infarction after treatment with thrombolytic agents may therefore be modified. Too large an increase in intracellular magnesium may have adverse consequences. Certainly, optimal mechanical recovery of a rat heart required magnesium concentrations in cardioplegic solutions to be centred on about 15 mmol/l: both higher and lower concentrations were associated with less than optimal recovery.[8]

Intravenous magnesium at differing doses may have a combination of beneficial and deleterious effects. Clearly we need to investigate and rationalise the use of magnesium rather than continue with empirical treatment.

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The first thyroid scan

SIR,—The obituary of Norman Veall credits him with having performed the first thyroid scan.[1] I do not wish to detract from his many achievements, but this requires correction.

To the best of my knowledge I, with J Rotblat, performed the first thyroid scan in Liverpool University's physics department on 10 September 1947. We were able to demonstrate an intrathoracic extension of the thyroid.[2] The original notebook still exists.

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AUTHORS' REPLY,—We regret that shortage of space led us to oversimplify the history of thyroid scanning. Veall himself clearly acknowledged G Ansell's contribution.[1] We agree that Ansell and Rotblat did the first study, designed to locate the extent of a large retrosternal goitre leading to mechanical obstruction.[2] But the physical bulk of the Geiger-Müller type 4 counter, then the only type available, restricted them to measurements at nine locations chosen by the operators over a very large gland together with 23 background sites.

Veall's contribution was to design an elegant collimator, which improved the resolution of a then novel type of Geiger-Müller counter by a factor of six compared with Ansell and Rotblat's apparatus.[1] He used a Perspex jig drilled with locating holes at regular intervals, which in effect turned this apparatus into a hand driven rectilinear scanner. As Taylor and Stewart later showed, Veall's apparatus gave scope for imaging a much broader range of thyroid disease and removed the influence of unconscious operator bias in the generation of images.[3]

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The new disability living allowance

SIR,—I have just attended a seminar run by the Department of Social Security on the introduction of the disability living allowance. I am perturbed at the consequences of what is planned.

In April attendance allowance for the under 65s and mobility allowance will cease to exist and will be replaced by the disability living allowance. Attendance allowance continues in name for those over 65, but the application procedure still follows that for the disability living allowance.

Under the current system a person applying for mobility or attendance allowance has to fill in a short form and send it off. Every applicant is then visited by a doctor (usually a general practitioner), who fills in a four page report which forms the basis of the assessment. Under the new system the customers (as now called) fill in the form themselves, and this is the basis of whether the allowance is granted or not. The form is 26 pages long.

Currently, the report from the doctor is received and assessed by a doctor working for the Department of Social Security. In the new system the department's doctor is replaced by a lay person who has been trained in the application procedure but has no medical knowledge. If that lay person does not understand something he or she will consult with a department doctor or write to other professionals concerned; if it is still not clear a doctor (still usually a general practitioner) will be asked to visit. It is estimated that only a fifth of applications will require a visit by a doctor. Visiting doctors are being told to stop using precise medical terminology and instead use terminology understandable to a lay person.

The money paid to the visiting doctor forms a tiny percentage of even just one year's allowance. I do not understand why such a valuable and cheap report is being abandoned. Also, I am concerned that the 26 page document will form an insurmountable hurdle to many, particularly uneducated people, elderly people, and the mentally ill. Applicants are losing the benefit of a consultation with, and a report from, a medical practitioner whereby the often subtle nuances of a disabling condition can be brought out and explained on their behalf. I would very much like this to work as there is too much at stake, but I have my doubts.

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Medicine in Europe

SIR,—The series of articles looking at medical issues in Europe is instructive, but I take issue with the way that Tessa Richards dismisses the activities of the royal colleges and, particularly, the European committee of the Royal College of Physicians. The European committee was not set up as a reaction to anything happening in other colleges, and the one thing it does not do is organise European scientific meetings and exchange visits.[1]

The BMA has worked long and patiently in Europe, particularly through the Standing Committee of Doctors of the EC, which was established in 1959. But, as Richards stated in a news item[2] and is echoed in the sixth article in the series,[1] "Time and time again [the Standing Committee of Doctors of the EC] has been left shaking its metaphorical fist as directives emerge whose contents have at times been considerably at odds with the best interest of patients and the profession." Far from the BMA and the royal colleges competing in their activities in Europe, it is essential that they cooperate and complement each other's efforts. The colleges, however, have to find and pursue their own particular role in Europe, and the conference of colleges must use its organisation to coordinate those activities.

The Royal College of Physicians' European committee therefore has a major interest in the activities of the monospecialty sections of the European Union of Medical Specialists as well as the Advisory Committee on Medical Training. It is also keen to build up a profile of the various medical, and particularly medical academic, bodies in the various countries so that it can enter into discussion and dialogue with them.

The most difficult problem for the colleges, the BMA, and British government departments is to find ways of influencing the legislative system in Europe. Unfortunately, at present this seems unlikely to be achieved through the European Union of Medical Specialists, the Standing Committee of Doctors of the EC, or the Advisory Committee on Medical Training. If these bodies cannot be made more effective some different structure must be devised. Whichever way, we will certainly need to work together if we are to achieve any success.

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