and what proportion were medically qualified—or is it largely scientists without a medical degree who are affected? Despite the report's shortcomings, however, its proposals should be taken seriously. The £80m used for short-term contracts, the association calculates, could fund instead some 5000 permanent research staff and 2400 postgraduate students. It recommends better integration of funding agencies to co-ordinate policies and a career structure similar to that of hospital medicine, with a professional body to promote the interests and maintain the standards of research workers.

Neither this proposal nor the Ciba suggestion of more short-term grants is likely to be widely accepted in the near future; but might not both be tried, on a limited scale in different centres, with detailed evaluations? Meanwhile other aspects of careers and remuneration need attention. Financially as well as in terms of risk, a doctor choosing an academic career may be penalised in several ways; and the quantity and quality of applicants inevitably suffer.[7] The Ciba meeting agreed that research fellowships should carry much higher stipends and that there should be parity of salaries and conditions of service between the universities and NHS, including distinction awards that take account of academic excellence and compensation for forgoing sessions of private practice and, in the case of younger doctors, extra duty allowances. The system that forces Nobel prizewinners to earn less than clinical research workers also needs scrutiny. But if money is to be found for all this clearly more economic types of organisation will have to be developed. Another change needed is in attitudes to research. A doctor who is fired to do a spell of research should be encouraged, and not penalised if he returns to the clinical ladder; training schedules should be devised less rigidly and with more sympathy for clinical science.[8]

Too few research workers of high calibre and too few leaders of research; thought the Ciba meeting, are emerging in Britain and this is not a problem only of money. Training students, at school and university, how to think and how to discover the excitement of medical science—in the face perhaps of popular disillusion with science—need not cost money; but it calls for a radical look at both examination syllabuses and teaching.

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Newly acquired right bundle-branch block

The currently accepted electrocardiographic criteria of right bundle-branch block were defined in 1932[1]; yet despite the vast numbers of publications that have appeared since then the clinical implications of this electrocardiographic sign remain largely unknown. Established associations include hypertension, coronary heart disease, valvular heart disease, congenital heart disease, pulmonary embolism, pulmonary hypertension, and cardiomyopathy.[2 3] But what is the significance of newly acquired right bundle-branch block? Is it an ominous warning of further serious cardiovascular disease and possible death, or is it an electrocardiographic abnormality of little prognostic importance in itself?

Few studies have answered these important questions satisfactorily. Most do not distinguish between recently acquired and old right bundle-branch block. Others have studied selected populations, and almost all lack adequate controls. A recent study from Framingham, however, has provided some specific answers.[4] The incidence of newly acquired right bundle-branch block was low; only 70 cases were accumulated after 18 years' follow-up of 5193 people. Such a small number of patients means that we must be cautious about applying the results generally. Data were collected every two years at routine check-ups, patients who developed right bundle-branch block and subsequently died before their next routine visit thus being excluded. With these reservations, the study provides some valuable data for the general physician.

The incidence of right bundle-branch block increased with age, and in 70% of cases its onset was preceded by the diagnosis of some cardiovascular disorder. These disorders included hypertension, cardiac enlargement on chest radiographs, congestive heart failure, valvular heart disease, and diabetes. Hypertension was associated most frequently, occurring in 60% of cases. Each cardiovascular abnormality occurred twice as often in patients with right bundle-branch block as in controls. After the development of right bundle-branch block the incidence of coronary heart disease and congestive heart failure was two and a half and four times respectively that seen during the same period in the controls—a difference reflected in an increased accumulative death rate from cardiovascular disease at each two-year interval after the onset of right bundle-branch block. Analysis of the QRS duration provided impressive prognostic data. Of the 12 people with a QRS duration of 140 ms, six died of cardiovascular disease and all developed clinical cardiovascular abnormalities. In contrast, in those with a QRS duration of 120 ms one-third remained free from all cardiovascular abnormalities during the follow-up period.

The development of right bundle-branch block may be an early sign of conducting tissue disease that will eventually progress to complete heart block with the development of Stokes-Adams attacks.[5] In this study, however, only four individuals developed evidence of higher degrees of atrioventricular block. Eventual treatment with a pacemaker seems to be needed only rarely in such patients with right bundle-branch block.[6]

The conclusion to be drawn from this study is that right bundle-branch block most commonly occurs in people who have or will soon develop clinically apparent cardiovascular disease; when there is no clinically apparent disease the cause of right bundle-branch block is unclear. In a study of 37 pilots, for example, who underwent cardiac catheterisation because of newly acquired right bundle-branch block, almost all had a mildly raised end-diastolic pressure, possibly suggesting a diffuse abnormality of the ventricular myocardium.[7]

What should the physician do, therefore, when faced with

a patient with newly acquired right bundle-branch block? Though its appearance suggests the possibility of heart disease it is not specifically related to any condition. A simple history and examination should show up any apparent underlying cardiovascular disease needing treatment. Regular follow-up is justified; but in the absence of any other clinically evident cardiovascular abnormality patients should not have their activities restricted, nor should they need invasive investigation.

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Drug information for patients: keep it simple

What should patients be told about the drugs they take? How should they be told and who should tell them? Should they even be given any written information at all? And, if so, who should produce it and how should it be designed? These were some of the questions tackled by a recent meeting of the Medico-Pharmaceutical Forum.

The conference agreed that oral instructions from the doctor are not enough: doctors sometimes fail to give them, and patients often either do not understand or forget them. Many studies have shown the frightening results of incomprehension and forgetfulness; and instructions on the bottle, which seem simple and uncomplicated to the doctor and pharmacist, are often either wrong or misunderstood as well. These failings seem to make a case for clear written instructions to be given with the drug, but problems remain.

Carefully designed written information can improve compliance with drug taking, the conference was told, but studies of some leaflets have failed to show any improvement. The design of the leaflet is all important, and too many are overlong, overcomplex, and incomprehensible to many patients. The size of the leaflet, the language used, the typeface, layout, illustrations, and the explicitness and specificity of the content are all vitally important, and a deficiency in one aspect may render the leaflet useless. Yet the Medicines (Leaflets) Regulations of 1977 require pharmaceutical companies to include with their drugs either no information at all or a layman's version of everything that is given in the data sheets the doctor receives. This is patently absurd, and the conference thought that a good case could be made for repealing these regulations, although one drug company claimed that the Department of Health and Social Security would allow simpler instructions to be provided in addition to the layman's data sheet.

The problem of who is to produce such leaflets is difficult. Nobody seemed enthusiastic that it should be the drug companies alone, and anyway in Britain only about 20% of medicines are given to the patient as they come from the manufacturer: most are repackaged. The conference heard a proposal that some kind of national body should be established to produce these leaflets. This would mean uniformity and standardisation of the leaflets, and efficient use of resources; doctors, pharmacists, psychologists, consumers, and others could all be represented on such a national body—which could start by designing leaflets for six common drugs, and then do pilot studies to estimate their effectiveness. But will the Government tolerate another quango, who will pay, and who will distribute the leaflets? These issues were not much discussed. Nor was another phantom hanging over the conference: the proposed changes in product liability law—the laws governing compensation for drug injury. The chairman asked that this issue—a complicated and controversial one—should be avoided, but new laws might require that extensive information should be given to patients on the drugs they take. Germany and Holland already require such information.

Undoubtedly we need well-designed leaflets giving clear information on drugs. We know something about designing such leaflets, but we have much to learn, and many doctors will be surprised by the simplicity and directness of the best leaflets. One well-known piece of equipment when it is bought new contains not only the usual complicated instructions but also a card saying: "We know nobody reads the instructions, but this is the one thing you must do, and these are the two things you must never do." This is perhaps the kind of leaflet we will need for drugs.

Outcome of pregnancy after cone biopsy

An inevitable consequence of cervical cytology screening is the problem of persistently positive smears in women who have not completed their families. Although a comprehensive screening programme does not change the rate of positive smears, it increases the number of young women who present for further investigation and treatment.[1] The traditional investigation, cone biopsy, has the advantage that it provides adequate tissue on which the pathologist can base his diagnosis, and at the same time the biopsy will be sufficient treatment to deal with the lesion in many cases.[2] On the other hand, cone biopsy is a mutilating procedure that may undermine the functional competence of the cervix during subsequent pregnancies.

Two studies[3 4] of the outcome of pregnancy after cone biopsy of the cervix found spontaneous abortion rates of 12% and 22% and premature labour rates of 7·5% and 9·5%. Although these premature labour rates seemed high, firm conclusions could not be drawn because women who have had cone biopsies tend to be of higher maternal age and parity and of lower social class than the general population. In a recent study Jones *et al*[5] compared the outcome of pregnancy in 66 mothers after cone biopsy with that in a carefully selected group of matched controls. They found that cone biopsy increased the premature delivery rate significantly from 5% to 18% and the incidence of low-birthweight babies from 8% to 21%. Although the difference fell short of formal significance, the caesarean section rate was also higher after cone