Hampton JR. Should every survivor of a heart attack be given a beta-blocker? Evidence from clinical trials. *Br Med J* 1982;**285**:33-6.

A detailed critique of the available data followed by the views of a clinical pharmacologist (A Breckenridge pp 37-8) and some overall conclusions (G Rose pp 39-40).

Hitchings RA. Beta-blockers in the treatment of chronic simple glaucoma. *Br Med J* 1982;**285**:84-5.

An up to date editorial that concludes that timolol maleate is a major advance in the medical management of this condition.

Lebrech D, Poynard T, Hillon P, Benhamou J-P. Propranolol for prevention of recurrent gastrointestinal bleeding in patients with cirrhosis: a controlled study. *N Engl J Med* 1981;**305**:1371-4.

Of 74 patients 96% who were randomly assigned to propranolol were free from recurrent bleeding at one year compared with 50% of patients treated with placebo.

Loeb HS, Bredakis J, Gunnar RM. Superiority of dobutamine over dopamine for augmentation of cardiac output in patients with chronic low output cardiac failure. *Circulation* 1977;**55**:375-81.

The acute haemodynamic effects were compared in 13 patients (cardiomyopathy, ischaemic heart disease) receiving digitalis and diuretics.

Man In 'T Veld AJ, Schalekamp MA. Pindolol acts as beta-adrenoceptor agonist in orthostatic hypotension: therapeutic implications. *Br Med J* 1981;**282**:929-31.

Description of successful treatment in three patients.

Norwegian multicentre study group. Timolol-induced reduction in mortality and reinfarction in patients surviving acute myocardial infarction. *N Engl J Med* 1981;**304**:801-7.

A well conducted secondary prevention trial.

Petrie JC, Jeffers TA, Robb OJ, Scott AK, Webster J. Atenolol, sustained-release oxprenolol, and long-acting propranolol in hypertension. *Br Med J* 1980;**280**:1573-4.

Once daily sustained-release oxprenolol was inferior to the others in producing satisfactory control of blood pressure over 24 hours.

Sonnenblick EH, Frishman WH, Le Jemtel TH. Dobutamine: a new synthetic cardioactive sympathetic amine. *N Engl J Med* 1979;**300**:17-22.

A consideration of adrenergic inotropic agents and the use of dobutamine, including comparative studies, in congestive heart failure and myocardial infarction with pump failure.

Letters to a Young Doctor

Overseas doctors

PHILIP RHODES

Many overseas doctors do well in the National Health Service. About one fifth of all principals in general practice were born overseas. About a tenth of all consultants are not natives of the United Kingdom or Eire. This success story, however, hides a serious problem. Unfortunately, many doctors from overseas have come to Britain for training and have been bitterly disappointed by their experiences. They have not been as well cared for educationally as they should have been. This has now been widely recognised, and honest, serious attempts are being made to set matters right. Nevertheless, it still cannot be guaranteed that foreign doctors will get a fair deal and do what they wish to do.

Most overseas doctors come to Britain to obtain a different experience from that in their own countries, to get a higher diploma of one of the royal colleges or faculties, to get some more experience after that, and then to return home. This is laudable, and many who work in the NHS sincerely wish to help. They genuinely think that in so doing they are making a valuable contribution to medical care elsewhere, especially in developing countries. A country such as Britain, which has advanced medical services, should help to train doctors so that they can return home better educated to deal with health care problems. In fact about 85% of all overseas doctors return to their own countries after a time in the NHS.

Overseas doctors should be warned that teachers in Britain cannot (with rare exceptions) teach in a way that is fully appropriate for a foreign country. Countries differ so much in their cultural attitudes, language, medical resources, politics, and other things that affect medical practice. All that may be done in the NHS is to teach British ways, skills, and attitudes.

With these taken in and understood the overseas doctor may return home to modify them and use them in a culture that he understands. He cannot normally transplant a British system to his own country, nor would he wish to. Rather, he must select out of the British system what he thinks is best and most suited to where he works. What is especially hoped for is that British medical standards may be so high that they may be used as a paradigm elsewhere. If doctors go home determined to raise the standards of practice, perhaps on the model of British medicine if that is thought applicable, then British medicine will have made a useful and lasting contribution to the medical weal. In many cases this high ideal has been attained, but in far too many others there has been failure. The reason for the failure of some overseas doctors to get what they want and need out of the NHS is not always to be laid at the door of the NHS. It is in the hope of minimising correctable errors that this article is written.

What to do before coming to Britain

Do not resign your job at home or move to Britain until you have done a lot of preliminary work by post. Much time and anguish may be saved if you do this. You may get some information about Britain and the NHS from the British Embassy or the British Council. But the best place to write to is the National Advice Centre, 7 Marylebone Road, London NW1 5HA, which advises and helps overseas doctors specifically and is independent of the government. It cannot arrange jobs for you, but by its advice it can give you an idea of how the system works and therefore of how to use it to your best advantage. The National Advice Centre may also be contacted if you are already in Britain. Interviews with counsellors may be arranged and information about educational courses and diplomas may be obtained. The BMA's commonwealth and international medical advisory bureau also provides advice for overseas doctors. If you are already in the NHS, however, you may seek advice

University of Southampton, South Block, Southampton General Hospital, Southampton SO9 4XY

PHILIP RHODES, MB, FRCS, professor of postgraduate medical education, and dean of graduate medicine for the Wessex region

locally from clinical tutors, consultants, and the regional postgraduate dean and learn about courses from bulletins and advertisements in the journals and in postgraduate centres.

Two things that you must do either before you come to Britain or immediately on arriving are register with the General Medical Council and join a medical defence society. Firstly, you must be registered with the General Medical Council to practise medicine in any capacity in Britain. You must therefore write to the council before coming here and it will tell you of the forms of registration which are provisional, limited, and full. Except for doctors of the European Economic Community and a few other countries and universities to whose graduates full registration is given, most overseas doctors work on limited registration—that is, registration is granted for five years, by which time it is expected that training will have been completed. Extensions are sometimes given and may be allowed for a person to proceed to full registration. Persons with limited registration may work only in supervised posts in the NHS, and they are not allowed to work in accident and emergency departments. You must get complete information about limited registration from the General Medical Council. Provisional registration is for preregistration house officers in their first year after graduation. It is unusual for overseas doctors to wish to do their preregistration year in Britain. Indeed, they are well advised to gain full registration in their own countries before moving here. Nevertheless, under certain special circumstances it may be possible for an overseas graduate to have preregistration experience here. Again, the National Advice Centre or a postgraduate dean may be able to advise, but they cannot obtain a post for you.

Secondly, to be able to practise medicine in Britain you must be a member of either the Medical Protection Society, the Medical Defence Union, or in Scotland the Medical and Dental Defence Union of Scotland. These are medicolegal organisations prepared to help in cases of alleged medical malpractice that may be brought against you, and they may be able to help in some other legal disputes. When you join one of these organisations and pay your subscription you will receive full information about their services.

In applying to the General Medical Council for information about registration you will be told of the Professional and Linguistic Assessment Board test (PLAB test). For nearly all foreign doctors, except those from the EEC and some British Commonwealth countries and a few with special exemptions, it is necessary to pass the PLAB test to obtain limited registration. The test is held regularly throughout the year and assesses professional medical knowledge in all subjects as well as ability in written and spoken English. Full details are given by the General Medical Council. This will guide you in subjects that you may have to study, for if you have been practising medicine you may have to brush up on pathology, surgery, and obstetrics and gynaecology. The standard of the examination may be about that of the final examination in medicine. You presumably would not wish to waste time reading these subjects in Britain when you can do so and prepare for the test at home. There is a waiting list of people who wish to take the examination, and you may be given a date to take the examination some months ahead. Until you have passed it you cannot (with few exceptions) proceed to registration and therefore cannot practise any form of medicine.

Far too many doctors have come to Britain only to find that they have to kick their heels in London, which is expensive, while waiting to take the examination. There is roughly a 40% chance of failing it, and then there may be another few months waiting for the next opportunity, during which you cannot earn money in medicine. The General Medical Council hopes to hold the PLAB test in various overseas countries when there are sufficient candidates to justify it. The intention is to prevent the hardship that some doctors impose on themselves by giving up everything at home and coming to Britain without sufficient thought of the consequences. So pass the PLAB test in your home country if possible, and if not work hard to make sure of passing

it here at the first attempt. It may be sensible to work out a contingency plan in case you fail—perhaps plan to return home until the next attempt, which may cut out high living expenses with no income from medical work. If you do fly in from home to take the test arrive a few days early. This will enable you to recover from tiredness and jet lag and will give you time to become familiar with getting about London and where the examination is being held. Give yourself plenty of time to arrive for the examination and do not cut things too fine. Remember that the climate may be colder and wetter than at home.

Finding a job

Once you have passed the PLAB test, have limited registration, and are a member of a medical defence society you can begin to look for a hospital job in the NHS. All jobs are advertised in the *BMJ* and the *Lancet*. Unless you are very senior, it is probably wisest to apply for senior house officer posts in the subject you wish to study. It is not easy for British doctors to assess the nature of previous experience as a registrar abroad. They might take a chance on you as a senior house officer but probably not as a registrar. In cricketing terms you have to play yourself in. In your first job you will be assessed and your consultants will advise you. If you do well they will help you to get further and better jobs.

A few overseas doctors seek out a consultant who is willing to give them a brief unpaid clinical attachment to his firm. Thus the doctor may learn a little of the ways of British medicine and perhaps obtain a reference from the consultant that might help in finding an established post somewhere. Do not ask for testimonials to carry around with you. They are quite valueless in Britain because, knowing that you will see and read the testimonial, the consultant will wish to be courteous and so will probably be non-committal. Testimonials are therefore bland and never influence a hard headed reader. A reference is quite different. It is confidential between he who asks for it and he who gives it. A proper appraisal can then be given. Please remember, however, that if you want someone to be a referee for you ask him beforehand (see 19 February, p 618).

Jobs

Think about your application for a job most carefully and present it well. Having a standard duplicated letter in which you fill in the blanks for different jobs you are applying for makes it obvious that you are applying for many jobs and that you will take anything that is offered. This may be the case, but you should not make it obvious. By all means, have your curriculum vitae duplicated, but each application should be a fresh one, using either the appropriate form or a new letter with which you enclose your curriculum vitae. Try always to have everything typed or, failing that, make sure that your script is a delight to the eye and not an abomination. Dozens of jobs are lost through careless applications, which are quickly thrown on one side. The thought is that if you cannot be bothered very much with this—which affects your life and livelihood—then you may not be very much concerned with practising good and careful medicine in the job you are applying for. You may feel that this is harsh, but it does happen.

It is very disheartening to be turned down for post after post, but competition for many posts is very severe. There may be 40 or 50 applications for one senior house officer job. If you do not get on to shortlists then first review your application to make sure that it is well presented. If there is any doubt in your mind ask your consultant, or a clinical tutor, or indeed anyone else who knows about such things. Next, consider whether you are being realistic about the jobs for which you are applying. You may be applying (i) in the wrong places, (ii) in the wrong grades, and (iii) in the wrong subjects.

Undergraduate teaching hospitals are very hard to break into, and at one time it was virtually impossible for any doctor to do so who had not trained there. Now this is changing, and there is much more mobility and openness than there used to be. Nevertheless, there is still an informal camaraderie that exists among teaching hospitals. Consultants tend to be known to each other, and they are often known about quite widely throughout the country. Naturally this weighs in favour of those candidates whom they support. The strength of this informal network is not to be overmagnified. Many people are appointed from outside it, and alternatively those who fall foul of it may find it acting to their detriment. These informal networks are inevitable in every society. They are not Machiavellian in intent. They simply develop and are used by their members, often unwittingly. One will talk to another about one of his protégés to help him. Many consultants establish very happy relationships with their juniors and naturally wish to help them on their ways. Many a foreign doctor has been very grateful for this kind of help when it has worked for him after he has broken into the charmed circle. But if you are not a native of the country and brought up in its educational and cultural system it takes time to find out about its systems and how they work. A Briton working in a foreign country has exactly the same kind of difficulties. There is nothing specifically British about it. It operates everywhere.

The best bet for a foreign doctor who is on his own and trying to make his own way is to apply for a post in a good district general hospital in Britain. The competition may or may not be less severe there. Practice in such hospitals will be of a very high standard, and educational and regional courses will be run in the postgraduate medical centre. Furthermore, the authorities will subscribe to the terms and conditions of service as regards study

leave. If you get such a post you will be able to learn about medicine in Britain, take your examinations, and get good references from your consultants when it is time for you to apply for other posts. When you make your first application you may not have referees here. It may take a long time to obtain references by post from your previous teachers resident abroad. The National Advice Centre will ask for references from your teachers at home and hold them against the time when you need to arrange for them to be sent to a prospective employer if you ask them to do this. This preserves the confidentiality of references and avoids delay in having them accessible.

Apart from competition possibly being less in district general hospitals than in undergraduate teaching hospitals, competition is also likely to be less in the north of England and in parts of Scotland and Wales than in the south of England. Nearly one third of all medical graduates in Britain are trained in London and they tend to seek posts in and around London and the south. London also has the largest concentration of postgraduate medical students attending schools of the University of London and other courses. Midland and northern cities are much more industrial than southern ones. As in many other countries native doctors may try to avoid them, thinking that they are undesirable as compared with rural and southern areas, where the climate also may seem to be better. But what the overseas doctor wants is a good graduate education and help with passing his examinations. This he will get in any major district general hospital anywhere in Britain. This is not to say that obtaining a post in London is impossible, but only that it may be more difficult than elsewhere.

In the next article I shall continue discussing what the overseas doctor may find in Britain.

How efficient is gammaglobulin in preventing hepatitis? What dose should be given? How long does the protection last?

Human gammaglobulin is available in two forms—normal immunoglobulin for protection against hepatitis A (infectious hepatitis) and hepatitis B immunoglobulin, prepared from donors with high titres of anti-HBs for prophylaxis against hepatitis B. Normal immunoglobulin, which is derived from pooled plasma of healthy subjects, most of whom will have antibodies to hepatitis A virus, is 80-90% effective in preventing hepatitis A infection when given before exposure or within one to two weeks of exposure; protection lasts about four to six months.¹ Even if hepatitis is not prevented the illness is often attenuated and may be rendered subclinical; such patients develop active immunity that is lifelong. Normal immunoglobulin should be given to close household contacts (both adults and children) of subjects with hepatitis A at a dose of 0.02-0.04 ml/kg bodyweight (by intramuscular injection) unless they give a history of having had hepatitis A or are known to be anti-HAV positive. People travelling abroad should receive 0.06-0.12 ml/kg bodyweight of immunoglobulin, which should be repeated at intervals of six months as necessary.² It should not be given for at least two weeks after immunisation with measles, mumps, rubella, or polio vaccines.

Hepatitis B immunoglobulin is indicated where there has been accidental inoculation of HBsAg positive blood or other material by a needlestick accident, spillage into the eye or mouth or over an abrasion, or very heavy contamination of intact skin. The immunoglobulin should be given as a dose of 0.05-0.07 ml/kg bodyweight (5 ml for the average adult) as soon as the accident has occurred, and certainly within 48 hours. After this time it is of doubtful value. Blood should be taken before the first dose for serological tests for HBsAg and anti-HBs but immunoglobulin should be given without waiting for the result. If subjects are negative for both antigen and antibody a repeat dose of immunoglobulin should be given after a month. Other groups that should be given hepatitis B immunoglobulin include infants of mothers having acute hepatitis B in the last trimester of pregnancy, infants of e antigen positive mothers and those of mothers who are negative for both HBe antigen and anti-HBe, and to spouses of patients with acute hepatitis B.³ Hepatitis B immunoglobulin has

also been administered to staff of renal dialysis units when HBsAg positive patients have been undergoing dialysis. Staff in such units and other groups at high risk of contracting hepatitis B should now be considered for active immunisation with hepatitis B vaccine.—J B SAUNDERS, lecturer in liver diseases, London.

¹ Co-operative study. Prophylactic gamma globulin for prevention of endemic hepatitis. Effects of US gamma globulin upon the incidence of viral hepatitis and other infectious diseases in US soldiers abroad. *Arch Intern Med* 1971;128:723-8.

² Pollock TM, Reid D. Immunoglobulin for the prevention of infective hepatitis in persons working overseas. *Lancet* 1969;i:281-3.

³ Working party on the clinical use of specific immunoglobulins in hepatitis B. Use of immunoglobulin with high content of antibody to hepatitis B surface antigen (anti-HBs). *Br Med J* 1982;285:951-4.

Would satisfactory protection against whooping cough be achieved by administering pertussis vaccine intradermally in small doses (0.1 to 0.5 ml)?

It is true that many antigens are immunogenic in smaller doses when given by the intradermal route than by subcutaneous or intramuscular injections. The intradermal technique, however, is not easy and cannot be recommended for general use because a "failed" intradermal injection provides an inadequately protective dose subcutaneously. The usual adsorbed type of antigen cannot be given intradermally without the risk of provoking persistent local reactions at the injection sites. These indurated reactions, about 5-7 mm in diameter, were not considered unacceptable in a trial of adsorbed triple vaccine given by intradermal jet injections to Ugandan children,¹ but the antibody responses to pertussis were not determined in this, the only reported trial of this method of which I am aware. The theoretical possibility that intradermal immunisation with plain pertussis antigens might be satisfactory would have to be established by field trial, and this method cannot be safely recommended for general use in Britain on present evidence.—N R GRIST, professor of infectious diseases, Glasgow.

¹ Stanfield JP, Bracken PM, Waddell KM, Gall D. Diphtheria tetanus pertussis immunisation by intradermal jet injection. *Br Med J* 1972;iii:197-9.