Future Consultant Staffing in Communicable and Tropical Diseases

A REPORT OF THE ROYAL COLLEGE OF PHYSICIANS

During the past forty years there has been a gratifying decline in the classical infectious diseases and a decrease in the number of fever hospitals which housed them. This has encouraged the misconception that infection is now of little importance in medicine, at least in wealthier countries. In recent years the fallacy of this assumption has been recognised and is now being increasingly challenged.

With the closure of many of the smaller isolation hospitals there has been a gradual reduction in the number of consultants in infectious diseases. As a result, in many parts of the country and in a significant number of teaching hospitals, the specialty of infectious diseases is no longer represented. This is in marked contrast to North America and Scandinavia where every medical school has an academic department of infectious diseases and most general hospitals have physicians with interest and experience in the diagnosis and management of infection. In the USA, where there are approximately 1,000 board-certified infectious diseases physicians, the term ‘infectious diseases’ is used to denote infections of all types, including those which are not communicable.

The diagnosis, treatment and prevention of infection remains a major challenge to hospital clinicians, general practitioners and community physicians. For example, at any one time 20 per cent of patients in hospitals in England and Wales are suffering from an infection, half of them acquired in the community and the other half during the patient’s stay in hospital. These infections are of particular importance in certain groups of patients, including the immunosuppressed, the neonate, the elderly, and those undergoing major surgery and requiring intensive care. Increasingly, such infections are caused by less common organisms which are frequently resistive to standard antibiotics. As a result, their management requires special expertise, and antibiotic therapy is becoming complex. In addition, hitherto unrecognised infections such as Legionnaires’ disease and the acquired immune deficiency syndrome are constantly emerging and posing new diagnostic and therapeutic problems. Further, the enormous escalation in air travel has led to an increase in imported infections; many of these are trivial, but some require expert knowledge of tropical and infectious diseases and sometimes, as with Lassa fever, there are onerous public health implications. Such infections have assumed greater importance since the re-organisation of the National Health Service in 1974 when the post of Medical Officer of Health was abolished. Most specialists in community medicine today have little or no training or experience in infectious diseases and tropical medicine, and yet are faced with grave responsibility when outbreaks of infection occur in the community or in hospital. Training of microbiology staff in parasitology is also inadequate.

Concern has been expressed at the decrease in the number of physicians with training in infectious diseases and also at the decline in the academic status of the specialty. In David Tyrrell’s recent Rock Carling monograph[1], and in the British Medical Journal and Lancet leading articles[2,3] which followed it, there was a clear call for a change of course. One of the evident paradoxes in the current situation is that infection, in its broadest aspect, is once again in the forefront of academic medicine and the focus of much fundamental and applied research; this is reflected in the number of important scientific papers relating to infection which are being published in the leading medical journals. It is gratifying that many leaders of academic medicine are conscious of this problem and wish to see infection re-established as a proper field of study for clinicians as well as for laboratory-based scientists.

There are only 44 consultants in infection in the UK (26 in England and Wales) and 8 in tropical medicine. Some of the former are consultants in infectious diseases while others are general physicians with a special interest in infection. Few medical schools have academic departments of infectious diseases and only two have professors. For the existing physician in the specialty there are different patterns of practice ranging from those working almost exclusively in infectious diseases (usually in regional centres) at one end of the spectrum to general physicians in District General Hospitals with a particular interest in infection at the other. Because of the small numbers and their uneven distribution throughout the country, advice on infection and antibiotic usage is, in many hospitals, provided by the microbiologist who in recent years has frequently taken a clinical role. Microbiologists vary greatly in their clinical experience and involvement and, as with the physicians, different patterns of practice emerge, depending on local conditions. The high quality of British medical microbiology, including the Public Health Laboratory Service, has helped to maintain the standards of infection control in many of our hospitals. However, it is essential that laboratory-based expertise is complemented by an equally strong clinical presence in order to achieve the best standards of patient care as expertise in bacteriology is but one aspect of the management of patients with confirmed or suspected infections.
infections. Their differential diagnosis requires wide experience of medicine and of the indications for (and limitations of) diagnostic techniques such as CAT scanning, other forms of imaging, tissue biopsy and immunology. Diagnostic problems presenting as suspected infection (e.g. as PUO) may be non-infective in aetiology; alternatively, atypical presentations of infection can result in inappropriate investigations so that the bacteriologist does not become involved. The training and experience of an infectious diseases physician can make a crucial contribution in both of these circumstances and also to the treatment of infective disease and its complications for which the prescription of an antibiotic is usually only one factor.

One solution to the problem of relating clinical medicine to laboratory microbiology would be for those concerned to train in both specialties. This is being done increasingly in Australia and a very few appointments in the UK are of this type. Double qualification does, however, involve a long period of training often at the expense of research and when consultant status is reached it may be difficult to find time to do justice both to a busy clinical unit and to a laboratory. It would, however, be advantageous if the training of physicians in infectious diseases could include a more substantial element of laboratory work. Conversely, the training of microbiologists might include a clinical component, preferably in infectious diseases.

The admission statistics of any general hospital underline the need to provide substantial facilities for the isolation of patients with communicable disease. Most hospitals are ill-equipped to provide a satisfactory standard of care for the ubiquitous community-acquired infections or the refinements necessary for the management of opportunistic or imported disease. The argument that it is enough to retain specialist clinical opinion within regional centres is not supported by current cross-boundary referral figures; these indicate that patients with infection are usually treated locally, irrespective of the severity of their disease or available services. Further, clinicians at District Hospitals form the all-important base tier of the academic pyramid of any specialty including its role in undergraduate and postgraduate training as well as in research. District Hospitals should therefore be encouraged to appoint physicians with an interest in infection in order to complement the expertise of the microbiologist and to work in collaboration with other clinicians, including paediatricians and community physicians, in the diagnosis, treatment and prevention of infection.

Recommendations

Some modest expansion of the consultant grade is recommended in order to provide for the identified needs. Furthermore, we propose that the larger District General Hospitals should consider this specialty when planning future staffing so that the number of infectious diseases physicians may rise from the present low figure to between 60 and 70. Emphasis should be placed on a flexible staffing structure with a varying proportion of specialist work depending on the size of the hospital and the degree of clinical involvement of the microbiologist. In addition to the existing pattern of physicians with a greater or lesser involvement in infection, several other methods of staffing are possible and in some cases, necessary.

1. Tropical disease expertise supported by appropriate laboratory services will continue to be required in certain centres. Such expertise will, however, be required from time to time in all hospitals. This should be provided by infectious diseases physicians and it is important that they are trained in the management of imported infections including parasitic diseases, especially those such as malaria caused by Plasmodium falciparum that present as potentially fatal medical emergencies.

2. As previously mentioned, a few clinicians with Memberships of the Colleges of Physicians and Pathologists will have a greater than usual degree of laboratory involvement. However, in view of the length of training required they will be few in numbers. Similarly, clinicians with an interest in infectious disease epidemiology might possess both MRCP and MFCM.

3. Another suggestion, already made in discussions on other specialties, is the idea that the smaller District Hospital with only three or four physicians might have a post serving two special interests. Such a post might include respiratory medicine and infection, immunology and infection or gastroenterology and infection. A few such posts already exist.

4. It is a matter of concern that (again in sharp contrast to North America) there are so few paediatricians with a special interest and training in infection. Several leaders of academic paediatrics are aware of this problem and would welcome an increase in the number of paediatricians with such an interest.

Summary

(a) Infectious diseases and tropical medicine as clinically based specialties are in the decline, yet the importance of infection is as great as ever and advances in basic sciences have brought it once more to the forefront of academic medicine.

(b) A modest expansion in consultant posts in these specialties should be sought. Special expertise in dealing with infection could be offered by physicians or paediatricians within three categories:

(i) Specialists, including a small number with training in tropical medicine, appointed to regional centres linked to teaching hospitals who would be actively engaged in undergraduate and postgraduate teaching as well as research.

(ii) General physicians with a major interest in infectious diseases appointed to teaching hospitals where they would also be involved in undergraduate training and research.

(iii) General physicians with interest and training in infection working in District Hospitals (who might occasionally have a second interest, for example in chest diseases or gastroenterology).

The general principles of training of infectious disease physicians are set out by the Joint Committee on Higher
Medical Training. Perhaps a greater element of laboratory work or epidemiology than many trainees have undertaken in the past might be encouraged. For example, trainees could take an MSc in medical microbiology or epidemiology or receive laboratory training by local arrangement, perhaps as part of a project for an MD thesis.

(c) Regional and District Health Authorities should be encouraged to create new posts for physicians in infection in major District General Hospitals.

(d) In addition, regional units within or in close association with the relevant medical school or other academic centre will continue to be important as foci of good clinical practice, teaching and research.

(e) Medical schools might be encouraged to develop academic departments of infectious diseases or to create Senior Lecturer posts in infection within Departments of Medicine. Several grant-giving institutions such as the Wellcome Trust and the Nuffield Provincial Hospitals Trust have recently expressed interest in promoting academic study of infectious diseases.

References
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3. Anonymous (1982) *Lancet*, 2, 1258.

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