Haematology—trends and opportunities¹

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One of my postgraduate chiefs, who practised as a general clinical pathologist and at the same time as a consultant in tropical medicine, soon revealed his fundamental philosophy to his apprentice in 1945. He remarked. 'My dear fellow, medicine is pathology with Epsom salts, while surgery is pathology with the scalpel.' Very broadly speaking this axiom surely remains true today. On reflection every one of my chiefs during the earlier formative years of postgraduate training in medicine, surgery, paediatrics, obstetrics, general practice, and, needless to relate, general clinical pathology, had a profound respect for the clinical pathology laboratory. Indeed the clinical pathologist was normally the focal mine of information on all general hospital topics and he was often equally knowledgeable about general practice over a wide radius. This is not surprising for many reasons, including the fact that at that time he was often also the senior local honorary physician.

Before 1948

Before the advent of the National Health Service in 1948, haematologists as we know them today were virtually non-existent in the United Kingdom. For many years, however, some clinical pathologists and some physicians had declared a special interest in this field, while in many general hospitals honorary physicians were also in charge of the hospital clinical pathology laboratories. Before appointment the latter doctors had been trained in both general medicine and general clinical pathology. From some years of personal experience of this system, relatively little time could be given to laboratory and clinical haematology, while very few societies and journals were devoted to this discipline.

After 1948

In 1948 more senior members of the profession established as physician cum clinical pathologist were invited to devote themselves to one or other of these broad specialties as National Health Service consultants. Inevitably, because haematology was not a recognized specialty, those with a haematological bent opted one way or the other. This event was reflected in changes in the membership of the Association of Clinical Pathologists. Having by that time opted for haematology, I regretted the non-recognition of this specialty in Great Britain. If it had been so recognized, most if not all of our pipe dreams should have materialized fully many years ago. The National Health Service has, however, increasingly provided laboratory facilities for patients of both hospital and family doctors.

In spite of the undeniable fact that tremendous advances have been made in our knowledge of disorders of the blood, especially during the past 25 to 30 years with resultant benefit to patients, the struggle for full recognition of haematology as a specialty in its own right has continued for nearly all, but not quite all of the period. Although it has been abundantly clear to some of us for over a quarter of a century that a haematology department should provide a full laboratory and clinical service in this field, the integration of these two aspects of the specialty has been fraught with hazards of one sort or another. Medicine is of course a very conservative profession, and maybe rightly so. Even as early as 1950 the following sentence concluded a leading article in the Lancet: 'Today haematology can fairly claim any advantage available from full specialist status.' Yet 10 years later I (Blackburn, 1960) felt impelled to support Dacie (1960) who made an overwhelming case that haematology should be recognized as a specialty which required an organization distinct from pathology and medicine. At that time the heavy load of laboratory and clinical haematological practice was somewhat hidden for many reasons. Amongst these was the fact that official statistics really relating to haematology were submerged under such headings as 'general medicine' 'laboratories', and 'radiotherapy'.

Fortunately for the advancement of the specialty the College of Pathologists was founded in 1963. Certainly the now Royal College has leaped ahead with its basic objectives to encourage the study and improvement of the science and practice of path-

¹The Presidential address delivered before the Association of Clinical Pathologists on 20 September 1973.
ology, and to promote understanding of its methods and application by the aid of listed means. Without doubt the introduction of its Membership examinations has been a main factor in raising the standards of training in haematology. At that time, in 1963-4, success in the Final Examination meant in effect that the candidate should be fit for a consultant post in laboratory-based haematology. On the other hand success in the examinations for Membership of a Royal College of Physicians was usually interpreted as meaning that the candidate was suitable to train for a consultant post. Since then various reports of Royal Colleges of Physicians have contributed to the training of physicians interested in haematology. These include the 1966 Report of the Standing Joint Committee on Training for Consultant Physicians of the Scottish Royal Colleges of Physicians and Surgeons and the Scottish representatives of the Royal College of Obstetricians and Gynaecologists. While in this report haematology is clearly included in general medicine, it is interesting to note that under the third main group consisting of the laboratory services, the recommendation is made that the division into subspecialties should be left to experts in the subject. At the time I wrote the script for my contribution to the Signy volume in 1969, I had just learned that the Royal College of Physicians of London had recognized haematology as a clinical specialty. There seemed, however, to be no sign of real collaboration between the Royal Colleges of Physicians and Pathologists as to the overall future of haematology. Nevertheless, the laboratory-cum-clinical haematologist had been accepted as a valuable specialist more than 20 years earlier by many colleagues including surgeons and radiotherapists. The bilaterally orientated haematologist has been in a position to offer expertise in relation to many surgical problems, for example, by the provision of compatible blood and blood products, diagnosis and treatment of haemorrhagic states, and the laboratory and bed-side control of antimitotic and anticoagulant therapies.

The radiotherapist is orientated in much the same manner as the modern haematologist in that while he is deeply involved with technical procedures he too has to diagnose and treat all age groups and parts of the body.

Many other reports potentially affecting haematological practice have appeared in recent years. Thus in the Report of the Royal Commission on Medical Education, 1965-68, examples of suitable training programmes after the intern year are detailed in Appendix 5 under the heading, 'General professional training'. Here haematology is included in the sections on general medicine, pathology, and radiology and radiotherapy.

In the Reports of the Committee on Clinical Haematology (January 1969 and April 1970) the Royal College of Physicians of London indicated that it wished to add clinical haematology to the list of specialties it sponsored. The Royal College considered that the clinical management of patients with disorders of the blood should be undertaken by physicians and not by haematologists whose work was essentially in the laboratory. The College's views were considered by the British Society for Haematology. In its Report on the Specialty of Haematology (July 1969), the Society rejected the arguments of the College, condemning the introduction of a physician-haematologist who would undertake the management of patients with blood disorders. In the Society's opinion haematology must remain a single discipline and the division of haematology into 'clinical' and 'laboratory' would be to the disadvantage of both, seriously impairing the quality of service to patients. The Report continues as follows: ‘The haematology service should be centred in the laboratory: this would be staffed by medically qualified haematologists capable of managing a laboratory and providing the expertise necessary for the diagnosis and care of patients with primarily haematological disorders.’ Nevertheless it is my view that the Royal College of Physicians of London stimulated many other bodies to take note of the needs of the patients of the modern haematologist.

It was agreed in the 1970 Report of the Royal College of Physicians that all future discussions should take place with representatives of the Royal College of Physicians of Edinburgh and the Royal College of Physicians and Surgeons of Glasgow. Subsequently on 13 February 1971 a joint meeting of the three Royal Colleges of Physicians, the Royal College of Pathologists, and the British Society for Haematology was held at the Royal College of Physicians, Edinburgh. Here multiple reports, articles, and memoranda were discussed along with possible schedules of training for haematologists and their career structures. Widely differing views were freely expressed, in my opinion in a healthy and formative fashion.

Present Problems in Haematology

During recent years much new information relating to all major aspects of medicine has become available. Thus in haematology mechanisms of multiple disorders such as haemorrhagic syndromes and haemolytic anaemias have been elucidated, with resultant facilitation of diagnosis and treatment. The inevitable greatly increased demand for haematological expertise has been precipitated at a time when
evaluation of more complex techniques and the assessment of the significance of new experiments and observations has also become increasingly demanding. Unfortunately, haematological staffing (with doctors, technicians, and science graduates) and facilities have often developed in a somewhat haphazard fashion, and premises are frequently inadequate. While under these circumstances it has often been increasingly difficult and sometimes frankly impossible to maintain a satisfactory standard of laboratory and clinical practice in the specialty, the situation continues to present an exciting challenge for those doctors interested in combining laboratory work with direct patient care. Opportunities for development and research potentially involving doctors, technicians, and science graduates clearly abound.

Presently in the United Kingdom relatively few doctors specialize mainly or exclusively in laboratory and/or clinical haematology. Laboratory-wise the haematologist or clinical pathologist often has to assume major responsibility for one or more of the disciplines of bacteriology, chemical pathology, or histopathology in addition to haematology. I believe that some posts requiring a special interest in the laboratory aspects of haematology cannot be filled satisfactorily for this reason. In somewhat larger hospitals there is a tendency to have a haematologist who just provides cover during the absence of consultants in other branches of clinical pathology.

In relatively few hospitals, especially undergraduate teaching hospitals, independent clinical departments specializing in haematology have their own laboratory staffs. They may or may not provide an overall clinical and/or laboratory service to the patients of other units in their hospitals. Should their haematological services be restricted to their own units, the laboratory and consultant clinical expertise for the other units is usually provided by separate departments of clinical pathology, or, possibly more rarely, of haematology.

A universally respected surgical colleague of mine reminded me some 20 years ago, before his retirement, that one can run a hospital of sorts with nurses only but one cannot run a hospital at all with doctors only. At a time when there is a shortage of nurses, an ever-increasing demand for nursing expertise is required for the proper care of patients with haematological disorders. Thus patients with haemophilia and other haemorrhagic or potentially haemorrhagic disorders, including leukaemia and malignant lymphoma, require the skilled attention of nurses with special training in relevant paediatric and adult fields.

In some haematological centres joint clinics with other disciplines such as gastroenterology and radiotherapy have functioned very satisfactorily and with benefit to patients for some decades. At the present time the introduction of some new joint clinics is impeded by the lack of nursing staff and suitable outpatient accommodation.

Lack of adequate finance for the purchase of scientific equipment of proven value is often frustrating to the clinical pathologist in all disciplines. This has been one factor stimulating young haematologists to emigrate or to switch from haematology to other disciplines such as gastroenterology or internal medicine. Another potent factor has been and still is the lack of suitable posts at registrar, senior registrar, and consultant levels offering comprehensive opportunities in haematology in the laboratory, the ward, the outpatient department, and the blood transfusion centre.

Due to the national (and indeed international) shortage of trained haematologists, the pressure of routine work on the haematologist, together with his teaching commitments, whether they be in undergraduate teaching hospitals or regional board hospitals, often precludes adequate time for development and research. The ever-increasing demand for teaching with the expansion of established medical schools and the foundation of postgraduate medical centres throughout the hospital service has materially increased the load of the clinical pathologist of all types. Indeed one has the distinct impression that he or she bears the main brunt of these developments, often without adequate supporting staff.

During recent years the demand for those experienced in paediatric and geriatric haematological problems has become more pressing. Yet recruitment to and establishment of suitable specialized or combined posts to deal with these problems appear to be barely minimal.

The role of science graduates in the haematology laboratory, together with consideration of their training schedules, is presently being deliberated by various bodies. Much remains to be done in this important area.

Recent Important Developments

Three important documents have appeared recently, two of these in 1972 and one in 1973. In chronological order the first of these, entitled, ‘Training of medical graduates in pathology’, was published by the Royal College of Pathologists in January 1972. A general training period extending over approximately three years followed by a specialist training period of a minimum of three years is recommended. Under the heading, ‘General training period b. Haematology’, it is stated that training in haematology should include both laboratory and clinical
work. An outline of the desirable laboratory experience is followed by the statement: 'Experience of the clinical features of blood diseases should be gained in the outpatient department and in the wards. It is desirable that all trainees intending to specialize in haematology should obtain an appointment for one year in general medicine during the period of general training.'

The laboratory experience required under the heading, 'Specialist training period' is detailed. Not less than six months should be spent in blood transfusion work which should normally be carried out at an approved blood transfusion centre. Furthermore, wide experience in the examination, investigation, and treatment of patients with haematological disorders should be gained in outpatient clinics and on the wards. Consultative work should be undertaken with a wide range of other hospital departments, eg, surgery. Trainees should be encouraged to read widely and to attend lectures and short courses on relevant subjects. It is also recommended that if the necessary facilities for the outlined training are not available in the trainee's hospital he should be seconded to other centres for such training. Finally, trainees should be encouraged to undertake one or more research projects in pursuance of their specialist training.

The second publication, dated October 1972, constitutes the First Report of the Joint Committee on Higher Medical Training of the Royal Colleges of Physicians. Here on page 9 qualification for an approved post for specialist training in haematology effectively demands possession of the Primary Examination of the Royal College of Pathologists or the MRCP. After obtaining an approved post in haematology, the trainee is asked to write to the Secretary of the Joint Committee on Higher Medical Training and to the Royal College of Pathologists for enrolment.

The recognition of posts as suitable for training in haematology will be made through the Specialist Advisory Committee on Haematology of the Joint Committee on Higher Medical Training, on which specialist committee the Royal College of Pathologists is represented. The visiting teams would normally be composed of representatives of both bodies. In addition to the ward and outpatient facilities, it would have to pay particular attention to the suitability of laboratory facilities available, the adequacy of laboratory space for each trainee, and the standard of scientific and technical staffing of the department.

Re accreditation, towards the end of the training period the trainee is advised to apply to the Secretary of the Joint Committee on Higher Medical Training and also to the Royal College of Pathologists for such accreditation.

Part II of the First Report of the Joint Committee on Higher Medical Training includes a synopsis of the training programme for haematology. Here it states that consultant posts for haematologists are unlikely to be filled by general physicians with special experience in haematology. Those patients with haematological disorders who require specialist care would be referred to the nearest fully staffed haematology department. The recommendations made in the training programme are generally compatible with those made in the report entitled, 'Training of medical graduates in pathology', published by the Royal College of Pathologists, to which important document due reference has already been made.

The Specialist Advisory Committee on Haematology of the Joint Committee on Higher Medical Training has prepared the third document, entitled, 'Recommendations on training' (1973). This consists of a much more detailed expansion of the brief training programme in haematology in the First Report of the Joint Committee on Higher Medical Training. A copy of this document, which is available in the offices of postgraduate deans, will be sent to a trainee enrolling in the specialty of haematology.

The main objective of training is to provide specialists in haematology with competence to carry overall responsibility for the care of haematological patients, ie, to take charge of the laboratories on the one hand and also to undertake the care of patients with haematological disorders in wards and outpatient departments on the other. A flexible training structure allows recruits to the specialist period of training to enter from among those whose general professional training has been predominantly either in general medicine or in pathology, or from the group with mixed laboratory and ward experience.

With regard to blood transfusion, up to two years of experience in this field will be acceptable as part of the period of higher specialist training. A similar period in blood transfusion, normally in recognized blood transfusion centres, is acceptable in preparation for the final Membership examination in haematology of the Royal College of Pathologists. Furthermore this College has recently recognized blood transfusion as a subspecialty and recommended that its final examination in haematology may be so slanted. Stimulating and exciting training programmes combining blood transfusion centre and hospital work have been formulated recently by the Royal College of Pathologists. In a few blood transfusion centres a consultant or consultants already have official NHS hospital sessions concurrently in both laboratory and bed-side practice.

Three further recent (1973) decisions of the Royal
College of Pathologists are also relevant. The first of these, to include patients in the final examination in haematology (including slanted examinations), will be implemented as from the first final examination in 1974. Candidates will be expected to take histories and examine patients. Secondly, candidates holding the Membership of the Royal Colleges of Physicians of the United Kingdom or Republic of Ireland may be offered total exemption from the primary examination. Previously possession of an MRCP could exempt the candidate from the multiple-choice question paper only in the primary examination. Thirdly, one year of training for the MRCP would be accepted towards the five-year training period required before entry to the Royal College of Pathologists' final examination. These three important innovations should prove attractive to potential young recruits to the specialty from the wards. Furthermore, again on the brighter side, especially since 1969, a number of new university departments or subdepartments of haematology have been established.

In the National Health Service complex ('cogwheel system') and in universities it is abundantly clear that haematology should be fully represented in the divisions of pathology, medicine, and paediatrics.

Envoi

In conclusion it would appear that most of the major problems relating to haematology in the present context have been solved reasonably satisfactorily in very recent times. Maybe a wheel has turned full circle in the last 25 years. Thus it seems that the precursor of the modern haematologist with full charge of laboratories and patients was the general clinical pathologist cum physician of yesteryear. Clearly this young and challenging specialty of haematology in a unique position merits the attention of the young doctor interested in combining laboratory work with bed-side care.

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