Contemporary Themes

Radiological Training and Staffing in the Birmingham Region and Elsewhere

A. G. W. WHITFIELD, F. H. HOWARTH, R. F. FARR, A. W. ROBERTS

British Medical Journal, 1971, 2, 514-515

In every specialty, including general practice, good radiology is essential to the achievement of high standards of work. Many of the diagnostic and therapeutic advances that have been won during the past two decades involve complicated and time-consuming radiological techniques. The precise diagnosis and surgical treatment of congenital cardiac abnormalities, the investigation of severe hypertension, and the assessment and treatment of arterial insufficiency in the legs are obvious examples. The enormous increase in the scope and value of neuroradiology and the radiology of the alimentary tract must have added greatly to the work of diagnostic radiological departments, and the advent of a rational form of surgical treatment for coronary artery disease poses an incalculable further demand on radiological services.

In the Queen Elizabeth Hospital, Birmingham, the number of patients seen has not altered appreciably over the past 20 years. On the other hand, the number of radiological examinations has increased from 21,612 in 1950 to 29,735 in 1970, while the character of the work has altered out of all recognition. In the earlier years of the two decades all nurses and many other sections of the hospital staff had a chest radiograph twice each year to exclude pulmonary tuberculosis. Such examinations, involving only a few moments of time of a consultant radiologist, have long been discontinued, and in their place aortography, femoral arteriography, carotid and vertebral angiography, angiocardiology, and cineangiocardiology—all of which demand hours of exacting work—have developed. In 1960 only 14 patients had angiocardiology performed, but by 1970 this number had increased to 271, while over the same period arteriograms more than doubled.

General practitioners very rightly ask for open access to radiological departments. Without this they cannot hope to do first-class work, and with the increasing general and medical education of the public there is a growing demand from patients for radiological examination which even when not appropriate is difficult to refuse. This enormous and ever-increasing demand on radiological departments is difficult to measure exactly, but Bull's assessment¹ of an 8% rise every year is certainly not an overestimate. At this level work would more than double every 10 years.

Some Answers

The obvious answer to such a situation is to provide more space and equipment and to increase the personnel in the specialty at all levels—consultants, trainees, radiographers, and technicians. The Department of Health and Social Security, regional hospital boards, hospital management committees, and boards of governors have all shown a most enlightened approach to the problem in providing increased accommodation, the equipment necessary for new techniques, and all the latest devices for speed and labour-saving in the processing of films. There is no serious lack of technicians and though inadequate recruitment to radiography and loss by marriage produce a shortage of radiographers—particularly in peripheral hospitals which have no school of radiography—the greatest difficulty is in the ranks of consultants and trainee radiologists.

In 1959 in hospitals administered by the Birmingham Regional Hospital Board and the Board of Governors of the United Birmingham Hospitals there were 30 consultant radiologists in post. Today there are 52, and 10 consultant posts are vacant and cannot be filled. In 1969 there were 59 vacant consultant posts in England and Wales.^{1 2} Such figures are by no means indicative of the real shortage, for if the vacant posts could be filled a very considerable and necessary expansion in the number of radiological consultant posts would be implemented.

Poor Recruitment

It is difficult to understand why recruitment to radiology is so poor. Advancement to consultant status is probably more rapid than in any other specialty, and the rapid technological advances in the specialty and their contribution to the work of all branches of medicine must make it a most satisfying sphere of activity.

Lack of direct responsibility for patient care, which most doctors value so highly, is doubtless a factor. The lack of academic departments of radiology has also been blamed. While it is true that there are only three such departments in Britain and that the existence of an academic department stimulates local recruitment in a specialty it is very rare to find a radiologist who is not hopelessly overburdened with routine clinical work and who has found time to develop an academic approach to, or to embark on any research in, his specialty. Poor recruitment is also attributed to the low proportion of radiologists who achieve merit awards and the lack of available private practice to supplement a radiologist's salary from the National Health Service.³ Certainly the capital and running expense of radiological consulting rooms may be an appreciable deterrent. The fact that medical students have little tuition in radiology and the responsibility of regional consultants for several hospitals are other factors which are also stated to hinder recruitment.¹

University of Birmingham, Birmingham B15 2TJ

A. G. W. WHITFIELD, M.D., F.R.C.P., Director, Board of Graduate Studies
A. W. ROBERTS, B.A., Administrative Assistant, Faculty of Medicine

United Birmingham Hospitals

F. H. HOWARTH, F.R.C.P., D.M.R.D., Consultant Radiologist
R. F. FARR, M.A., F.INST.P., Consultant Physicist

It is difficult, indeed probably impossible, to provide accurate data on the recruitment trends in the specialty. The numbers passing the D.M.R.D. of the Conjoint Board might be thought to be a good indication, but how many of these are overseas doctors intending to return home once their training has been completed it is impossible to say. In 1950 there were 74 successful candidates, in 1960 56, and in 1970 108. There are other indications of improving recruitment, for, of those graduating in medicine from the University of Birmingham during the period 1948-58, 1.1% had entered radiology in 1963;⁴ but in 1969 the corresponding percentage of those graduating in the period 1959-63 had increased to 1.7%.⁵ At the same time the numbers of applicants for the D.M.R.D. course offered by the University of Birmingham has steadily increased.

Emigration

Shortage of radiologists is world wide and emigration is an important factor in Britain's radiological difficulties. Accurate emigration figures are impossible to obtain, but it has been stated that 30 left the country in 1968,³ and that the loss of trained radiologists by emigration is 25%.¹ Most go to the New World, where the financial rewards are three or four times greater than they are in this country.² Only one of the 1,395 graduating in medicine from the University of Birmingham between 1948 and 1963 is known to be practising radiology abroad,^{6,7} but 10 of 52 who have received radiological training in Birmingham have already emigrated.

The fact that there are two higher qualifications in radiology, the D.M.R.D. and the F.F.R., is a complicating factor in the appointment of consultant radiologists in the United Kingdom. Two years' experience of the specialty suffices for the D.M.R.D., but four years are required for the F.F.R. In 1958 the Faculty of Radiologists drew up notes for guidance of regional boards when considering applicants for consultant posts in radiology and said, "Before achieving the status of a consultant in Diagnostic Radiology a medical practitioner should *ideally* hold the Fellowship of the Faculty of Radiologists," and in 1970 the Faculty considered a memorandum on education which said, "The Fellowship of the Faculty of Radiologists is considered to be the higher qualification required in British Radiology and must *in due course* be a prerequisite to appointment as a consultant."⁸ In 1970 the East Anglian Regional Hospital Board advertised a consultant appointment in radiology at Newmarket and required an F.F.R. from candidates applying.^{9,11} While everyone would admire and support the Faculty's efforts to raise the academic standards of their specialty, at present it is obviously unrealistic to ask for the F.F.R.—which requires an additional two years' training—when holders of the D.M.R.D. can obtain a consultant appointment in the United Kingdom or abroad without any difficulty; indeed, they can exercise considerable selection about where they are prepared to work.

All consultant radiologists in the United Birmingham Hospitals and in hospitals administered by the Birmingham Regional Hospital Board hold the D.M.R.D. or its equivalent. Seven of 10 consultants in the United Birmingham Hospitals and 13 of 42 consultants working in Birmingham Regional Hospital Board hospitals also hold the F.F.R. Nevertheless, 12 of the 52 consultants hold either the F.R.C.S. or the M.R.C.P. or F.R.C.P., and four have obtained an M.D. While the importance and value of the F.F.R. is immense, the possession of advanced experience and a higher qualification in general medicine or general surgery or the acquisition of a doctorate by research are probably equally desirable attributes in a radiologist.

It is understood that the Faculty of Radiologists have it in mind to reduce the total training period required for their Fellowship in Radiodiagnosis to three years. While this reduction in time will bring the Fellowship within the reach of more trainees in radiology, it will obviously lower its academic

status and make it little better than the D.M.R.D. The Faculty is at present torn between the service requirements of the specialty and the standards of academic excellence it would wish to see in its consultants.

Training Facilities

In the present circumstances it is important to consider whether the training facilities offered to those considering a career in diagnostic radiology are sufficiently attractive. In the Birmingham Region two courses for the D.M.R.D. of the Conjoint Board are available, one in Birmingham and the other at Stoke-on-Trent. The courses last for two years; those attending are not required to be resident; and they are given paid supernumerary registrar posts for the duration of the course. During the first five months of the course, while preparing for the examination for Part I of the diploma, their work is carefully supervised by a tutor in physics, and during the remainder of the two years the tutor in radiology ensures that they have supervised experience of all branches of radiology and arranges regular tutorials for them. Failures in the Part I or Final examination are exceptional and those that have occurred cannot be attributed to any deficiency in the teaching and training programme.

Similar courses are available at Bristol, Cardiff, Glasgow, Liverpool, London, Manchester, and Sheffield and for the examination for Part I of the diploma at Leeds.

After completing the D.M.R.D. course there is no difficulty in trainees continuing their training as established registrars and senior registrars in the Birmingham Region, since there are enough posts to absorb all who are willing to stay. Indeed, nine senior registrar posts in the Region are vacant at the moment. During such continued training senior registrars are encouraged to read for and take their F.F.R., and each year the Faculty of Radiologists' regional tutor organizes a three-day F.F.R. course at Dudley Road Hospital for them. To date 12 of those who have trained in Birmingham have obtained their F.F.R.

There is every facility and financial support available for senior registrars who wish to engage in research with a view to obtaining an M.D., but very few avail themselves of the opportunity. The very high standard required for the M.D. of the University of Birmingham¹² is perhaps a deterrent.

Though every effort has been made to evolve and carry out a satisfactory scheme of interchange between senior registrars in the United Birmingham Hospitals and those in hospitals administered by the Birmingham Regional Hospital Board, this has proved difficult to implement because of the high proportion of vacant posts in regional hospitals.

The most disappointing feature of the Birmingham training scheme is the small proportion of those trained who have chosen to continue to work in the Birmingham Region. Altogether 52 have completed or almost completed their training. Of these, 10 have emigrated and 20 are working in other parts of the United Kingdom. Of the 22 remaining in the Birmingham Region, nine have not yet achieved consultant status and some of these may choose to work elsewhere despite local consultant vacancies for which they would be most acceptable.

References

- ¹ Bull, J. W. D., *British Medical Journal*, 1970, 3, 286.
- ² Ross, J. A., *British Medical Journal*, 1970, 3, 111.
- ³ Medhurst, G. A., *British Medical Journal*, 1970, 4, 177.
- ⁴ Whitfield, A. G. W., *Lancet*, 1964, 1, 374.
- ⁵ Whitfield, A. G. W., *Lancet*, 1969, 1, 882.
- ⁶ Whitfield, A. G. W., *Lancet*, 1963, 2, 874.
- ⁷ Whitfield, A. G. W., *Lancet*, 1969, 1, 667.
- ⁸ Middlemiss, J. H., *British Medical Journal*, 1970, 3, 227.
- ⁹ Eban, R., *British Medical Journal*, 1970, 2, 736.
- ¹⁰ Eban, R., *British Medical Journal*, 1970, 3, 590.
- ¹¹ Duncan, G. D., *British Medical Journal*, 1970, 3, 110.
- ¹² Whitfield, A. G. W., *British Journal of Medical Education*, 1967, 1, 359.