

The report was prepared by a special committee of the Royal Society. The period covered is the 10 years beginning in May, 1952, and it is concerned with scientists who were normally resident in and who obtained a Ph.D. degree in the United Kingdom.

The committee find that "the annual rate of permanent emigration of recent Ph.D.s is now at least 140 per annum." This represents about 12% of the total output of Ph.D.s in the main science faculties. Unfortunately the figures are not representative of medicine and engineering, because relatively fewer of the graduates in these faculties proceed to the Ph.D. As to the increases in emigration over the year the report states that annual numbers of permanent emigrants with a recent Ph.D. increased threefold in the decade. Thus, while the number was 43 in 1952 it was 143 in 1961.

In the last five years, notes the report, a number of outstanding scientists have been lost to the United States, including nine Fellows of the Royal Society. In fact there are now 20 F.R.S.s in what are probably permanent appointments in the United States (3.5% of the Fellowship).

In the universities the loss of staff by permanent emigration is now about 60 per annum (or 1%), according to the report. This rate of emigration has also increased threefold in the decade. Of the 547 members of university staffs who emigrated in this period 21 were anatomists, 21 physiologists, 13 bacteriologists, 13 pharmacologists, and 39 biochemists. These figures give only an incomplete picture of what medicine has lost in this decade, but it is worth noting that all these emigrants would have been unusually able people. We know too from the Overseas Migration Board's Statistics for 1961 (Cmd. 1905) that in 1960 and in 1961 792 and 704 British doctors emigrated—that is, left Britain for more than a year. Their place was taken by immigrant doctors from Commonwealth and other countries—602 in 1961 and 511 in 1962.

The report makes few comments on its figures, but nobody looking at them can doubt the serious harm to the nation that must follow from such a disproportionate loss of outstanding people. Apart from the high cost which the nation has often borne in educating scientists who have emigrated, the real loss, as the report says, is of the "leadership and creative contributions to science and technology" which these people would have made throughout their working lives.

In outline the problem of the emigration of some of our best people has been known to be serious for some years. There has already been some speculation on the reasons why some of our best scientists take the considerable decision to emigrate, and doubtless publication of the Royal Society's report will stimulate some more.

Surely an urgent investigation is needed to discover the causes of this flight of all the talents so that they may be remedied.

VOCAL-CORD PARALYSIS AFTER COMMON COLD

When paralysis of a vocal cord is due to a lesion of the recurrent laryngeal nerve the cord comes to lie in or close to the mid-line. This is partly owing to the surviving innervation (from the superior laryngeal nerve) of the crico-thyroid muscle, which pulls the thyroid cartilage forwards and downwards, increasing the antero-posterior diameter of the glottis and thus stretching the paralysed cord, drawing it more or less tautly across the larynx. Other factors are the mass and weight of the cord and of the aryepiglottic fold with its contained cartilages, contractures in the paralysed muscles, the condition of the crico-arytenoid joint, and the presence of periarticular fibrosis.¹ In this median position of the paralysed cord full adduction, and with increasing use over-adduction, of the opposite, active vocal cord preserves phonation and tends to conceal the lesion. Routine examination of the larynx before and after thyroidectomy has shown that one-third of cases of unilateral paralysis resulting from trauma to the recurrent laryngeal nerve are symptomless.² In nearly all these cases a normal voice is re-established whether the paralysis disappears or not, and treatment is unnecessary.

If the lesion is bilateral the accident of anatomy which is so peculiarly fortunate in unilateral cases now becomes disastrous. The close apposition of the paralysed cords causes dyspnoea, often necessitating tracheotomy. Fortunately these cases are rare. By far the commonest cause of bilateral paralysis of the laryngeal nerves is injury during partial or complete thyroidectomy. Other causes are poliomyelitis, advanced cancer of the hypopharynx and cervical oesophagus, and so-called "idiopathic" paralysis, a heterogeneous group in which the underlying lesion is probably a peripheral neuritis secondary to an often unidentified disease. An association with rheumatoid arthritis has been observed by Darke and colleagues,³ who found the changes of peripheral neuritis in the nerve trunk.

All these causes are well enough known to the laryngologist and the cases are usually encountered in a straightforward way. It is less well known that bilateral paralysis may arise during the course of an acute infection of the upper respiratory tract. M. D. Graham⁴ has described the case of a patient who contracted an apparently ordinary common cold, with some fever. Yet in three days he developed dysphagia and hoarseness with dyspnoea, necessitating admission to hospital and an emergency tracheotomy because of bilateral paralysis of the vocal cords. As the cords were closely apposed the recurrent laryngeal nerves were considered to be the ones damaged. The acute infection resolved with intramuscular penicillin and supporting treatment. In three weeks the local reaction in the larynx subsided and the right vocal cord recovered. The tracheotomy tube was then removed. On thorough

¹ Ellis, M., *Modern Trends in Diseases of the Ear, Nose, and Throat*. 1954, ed. M. Ellis. London, Butterworth.

² ———, *J. Laryng.*, 1946, 61, 286.

³ Darke, C. S., Wolman, L., and Young, A., *Brit. med. J.*, 1958, 1, 1279.

⁴ Graham, M. D., *J. Laryng.*, 1962, 76, 535.

¹ *Emigration of Scientists from the United Kingdom*. Report of Committee appointed by the Council of the Royal Society. Published by the Royal Society, London W.1. 1963. 5s. net.

investigation no other abnormality could be found, but a year later the left vocal cord was still lying immobile near the mid-line. Though laryngitis arising during a common cold is frequent enough to need no comment, this case record does reveal the rare possibility of a more extensive lesion. Graham could not determine whether a toxic peripheral neuritis of the trunk of the recurrent nerve had occurred, or whether the local laryngeal inflammation had damaged the nerve endings.

It has long been known that the virus of the common cold or of influenza occasionally produces anosmia or perceptive deafness, though the exact nature of either lesion is not certain. The notice of this case report may stimulate closer observation of the larynx in acute infections, with results which may prove surprising.

INTRODUCTION TO GERIATRICS

For the past two years the Postgraduate Medical Education Committee of Glasgow University, in association with the Royal Faculty of Physicians and Surgeons, have sponsored an introductory course in geriatric medicine open to doctors from all parts of the United Kingdom. The courses were directed by Dr. W. Ferguson Anderson, the regional adviser in diseases of old age and chronic sickness. Last year's occupied five days, and talks on administrative and clinical topics were supplemented by discussions and visits to hospitals, residential homes, and so on. Such courses serve a useful function, for many hospital geriatric departments have lately been set up and local authority services are being expanded, but there are still many doctors who have lacked an opportunity to learn precisely what goes on in geriatric hospitals, how they are organized, what their problems are, and what help they can expect from them with the care of the elderly sick. Glasgow's example could well be followed in other large cities or in hospital regions. The principal papers in the 1962 course in Glasgow have been collected together in a paper-covered book.¹ In the first part Dr. Anderson himself makes contributions on the logistics of the subject as well as on the design and staffing of geriatric services, and there are papers on retirement, preventive geriatrics, and the contributions made towards solving the general problems of the elderly by non-medical agencies. The second part is devoted to papers on a few of the clinical problems of the specialty. Here, for example, Dr. T. Douglas Grant deals with anaemia, Dr. Bernard Isaacs makes valuable contributions on hospital infection and on mental symptoms of physical disorders, while Dr. John Thompson deals fully and in practical fashion with incontinence. This latter paper is complementary, and in a sense a corrective, to the stimulating but often controversial opinions of Dr. J. L. Newman.² The presentation adopted here for publishing a group of local contributions on one subject in an inexpensive form is praiseworthy and might be copied

¹ *An Introduction to Geriatric Medicine*. 1962, Glasgow. Some copies are still available free of charge from Dr. W. Ferguson Anderson, Forest-hall Hospital, Barnhill, Glasgow.

² Newman, J. L., *Brit. med. J.*, 1962, 1, 1824.

elsewhere, for most of these were informal lectures which would not ordinarily appear in medical journals; it is fortunate they can have a wider circulation than among those who heard them delivered at this notable Scottish postgraduate venture.

CHIROPODY SERVICES

There has been much discussion in recent years about the place of the chiropodist in the National Health Service. After his three years' intensive training the modern chiropodist is capable of serving the community much better than by merely giving palliative treatment for superficial lesions such as corns and callosities. In the hospital service he is, or he should be, an essential member of the orthopaedic team, where he can give valuable help in various aspects of treatment and especially in making remedial appliances and in the supervision of footwear. But orthopaedic departments that have the services of a chiropodist are apt to find that they soon lose him to other departments, especially the department of dermatology and the diabetic clinics.

Outside the hospital the chiropodist can provide an invaluable service by assisting the aged and the disabled to remain independent. Recognizing this, the Ministry of Health encouraged local authorities to establish chiropody services for such purposes.¹ But there are many other types of patient who require treatment for medical reasons, yet under the National Health Service the general practitioner can refer his patients to such clinics only if they exist in his area, or to the orthopaedic department of a hospital. There are several obstacles in the way of setting up chiropody clinics. Apart from the difficulty in finding suitable premises and the cost of them, chiropodists are reluctant to staff them because they find the remuneration inadequate. Moreover, there is a serious shortage of chiropodists throughout the country.

The Society of Chiropodists suggested in a memorandum submitted to the Minister of Health and the Secretary of State for Scotland in 1958 that it should be possible for a doctor to refer his patients to a chiropodist in private practice when treatment was necessary for medical reasons, the patient paying part of the cost. Safeguards against abuse of such an arrangement could be provided by defining the type of case which would or would not be eligible for a contribution towards the cost of treatment. This would not only overcome the difficulties of setting up clinics in certain areas but would also provide a direct link between the medical practitioner and the chiropodist and obviate unnecessary reference to hospitals. Again, defects of the feet are common in children, and the assistance of a chiropodist would ease the task of the school medical officer in organizing a foot-care service comparable to the school dental service. But while the pay remains too low to attract enough chiropodists it seems doubtful whether the present services can be extended.

¹ Gallocher, J., *Mth. Bull. Minist. Hlth Lab. Serv.*, 1962, 21, 130.