MEDICAL PRACTICE

*For Debate . . .***Different types of neurologist**

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Most neurologists in the United Kingdom work in regional neurological and neurosurgical centres in or linked to university teaching hospitals. Such centres usually have two or more neurologists and neurosurgeons and at least one neuroradiologist, clinical neurophysiologist, and neuropathologist; they also provide scanning facilities and other neuroradiological and neurophysiological equipment. This concentration of skill, usually in large conurbations, means that many people live many miles from their nearest neurologist. Although many neurologists visit their neighbouring district general hospitals to run outpatient clinics and advise on inpatients, some hospitals are too far away from the main centres to make this practicable, and then their only contact is by telephone and transfer of patients.

This set up is far from ideal and is aggravated by the small number of neurologists and their uneven geographical distribution. My own, admittedly rough, calculations suggest that there are 158 consultant neurologists and about 18 honorary consultants in the United Kingdom and that the provision of consultant sessions varies from about 3.6 per 100 000 population in the four Thames health regions to only 1.6-1.9 in Wales, Wessex, and Trent.

Understandably, therefore, some physicians have considered that their patients, and their hospitals, might be better served by the creation of posts for physicians with an interest in neurology. These physicians would be based at the district general hospital and would take a full share in the acute general admissions as well as providing a neurological opinion, referring more unusual cases, when necessary, to regional centres for more complex investigations and neurosurgical treatment.

Advertisements for general physicians often indicate that

an interest in a medical specialty such as gastroenterology or diabetes would be an advantage. An interest in neurology is never specified, for the simple reason that the policy of the specialty is to train "pure" neurologists, a policy that was reaffirmed in 1979 and 1982 by the committee on neurology of the Royal College of Physicians.

Views of neurologists and professors of medicine

Conversations with neurological colleagues and other physicians indicated differing views on the potential value of physicians with an interest in neurology. I was stimulated to sound out a wider range of opinion. I therefore wrote to all 293 ordinary members of the Association of British Neurologists living in the United Kingdom and Ireland and to all 34 senior registrars in neurology, inviting their views on whether posts of consultant physicians with an interest in neurology should be created in those district general hospitals removed from easy service by neurologists from the regional centres. No questionnaire was sent: I asked my colleagues to reply in general terms. With this letter I enclosed a document reminding them of the present training requirements of the Joint Committee on Higher Medical Training, the numbers of neurologists and consultants in general medicine, the predicted number of annual retirements of neurologists over the next decade, and the incidence and prevalence of certain neurological diseases. I also sent them arguments for and against the appointment of physicians with an interest in neurology.

I received 201 (62%) replies; 127 were from the 176 doctors holding consultant or honorary consultant posts in neurology. Some of the members circulated had retired, and others work in fields other than clinical neurology. Many of my colleagues wrote at considerable length, and I am grateful to them for so doing. Although the replies were in general terms, I had no difficulty in rating the opinions expressed on a five point scale, expressing moderate or vigorous support for, or opposition to, the prime question of whether posts should be created for

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physicians with an interest in neurology. For example, a letter that began, "Every time I considered your letter a red mist descended across my field of vision . . ." could be safely assigned to one extreme of the scale, but a letter that admitted some advantages to the proposal but on balance concluded that neurologists should continue as pure specialists was assigned to an adjacent point. The figure (a) shows the results. I analysed the replies of the 127 doctors now holding consultant or honorary consultant contracts in neurology separately (fig (b)). It is clear

Responses of neurologists and professors of medicine to the question of whether posts of consultant physicians with an interest in neurology should be created in some district general hospitals.

that the committee on neurology of the Royal College of Physicians fairly reflected the views of the specialty and that neurologists are, on the whole, strongly opposed to such posts.

A month later I wrote in similar terms to all 132 members of the Association of Professors of Medicine, who could be said to represent the views of senior physicians who are not neurologists. It is a reflection of the isolation of neurology that only one member of the Association of British Neurologists is a member of the Association of Professors of Medicine. One hundred members (75%) replied, and the figure shows the distribution of responses, rated in the same way. Clearly, professors of medicine hold quite different views from neurologists, and most favour the creation of posts for physicians with an interest in neurology.

The thrust of the arguments put forward on both sides may best be illustrated by extracts from the letters that I received. Some professors of medicine acknowledged that:

"There will, of course, continue to be a need for some appointments for specialists practising neurology as a full time activity. . . ."

"I accept that there will need to be a very few super, super specialists who will be quite outstanding within their own very narrow field. . . ."

but most went on to support the idea of physicians with an interest, the benefits of which were succinctly stated by one professor:

"I find myself in broad sympathy with the view that there should be a substantial number of such posts. I have never understood why neurology should stand alone among the major specialties in not having two categories of consultants—the specialist neurologist not undertaking general medicine, and the general physician with an interest in neurology. I would have thought that the main advantage would be (a) the maintenance of a holistic view of medicine amongst neurologists, (b) better awareness of what is going on in other fields of medicine, (c) better service for patients of district general hospitals in which a moderately expert physician with an interest in neurology 'held the fort' for most routine neurological problems, rather than having non-expert physicians wait till the once weekly visit of the itinerant super-neurologist—who could be consulted for the difficult patient. . . ."

Another drew an analogy with type A and type B cardiologists,¹ and, like many, drew attention to the neglect of cerebrovascular disease:

"Within neurology the main load is of course cerebrovascular disease, which neurologists always conveniently forget about. To have physicians with neurological interests, much of whose business might be with cerebrovascular disease, could only improve the management of this problem. Such a 'type B' neurologist would certainly know when patients needed computed tomography, carotid angiography, and myelography, and could act as a filter through which a district general hospital could have rapid access to a regional centre where the specialised facilities could be concentrated. The present system of having more than enough 'type A' (highly specialised) neurologists so that they can do clinics in peripheral district general hospitals seems to be totally wasteful. . . ."

Although one neurologist wrote:

"I have to say that I am outraged by acute neurological conditions being dealt with by cardiologists—or worse. . . ."

even a generously staffed district general hospital is unlikely to have a fully fledged cardiologist or neurologist on immediate call. The system works only because endocrinologists, gastroenterologists, rheumatologists, and even physicians in nuclear medicine are seen as suitable physicians to look after acute general admissions. There seems little reason why neurologists should not do likewise, for, as most professors of medicine agreed:

"I am sure that neurologists will be quite as able to cope with the difficulties which arise from the general medical commitment. There are many examples of other specialists, who are far further removed from the main stream of medicine than neurologists, taking this responsibility. . . ."

"The great clinical skills and acumen that clinical neurology demands would clearly be appropriate to general medical intake. . . ."

The neurologists, on the other hand, were not so sure:

"I do not think that any neurologists among my friends, contemporaries, and colleagues are capable of managing and supervising patients with acute general medical problems. I am quite sure that I am not capable of doing so, and I would not trust any friend or relative of mine with an acute medical condition in the hands of any neurologist that I know."

These views were widely shared by the neurologists who wrote on this point. They may reflect in part the isolated training experienced in centres of neurological excellence, but they also reflect the understandable anxieties of neurologists about the effects of their absence from practice in general medicine. There is, however, no reason to believe that a new cohort of recruits would be unable to undertake general medical duties provided that appropriate training posts were devised. As one professor wrote:

"In particular I would welcome a more flexible approach to training, such that joint accreditation in neurology and, say, general medicine, clinical pharmacology, or some other specialty was possible, but it would have to be accepted by the Neurology Specialist Advisory Committee that the trainee's experience in pure neurology might be less. But it would broaden the horizons of neurology even if it meant that neurologists might have to get more involved in the commonplace, such as strokes."

Many neurologists thought that the best way to improve neurological services was to create more pure neurologists.

"I know there are arguments on both sides, but for me the overriding consideration is providing the best possible care for patients with neurological disease. . . ."

Another neurologist made an identical point for technical specialism. He wrote:

"A neurologist would indeed probably be as good as a gastroenterologist at looking after a patient with a coronary. Unfortunately both would be very definitely inferior to a cardiologist. I know what sort of doctor I want when I have my first coronary—a cardiologist conversant with all the latest technology and pharmacology for dealing with the inevitable complications that I would develop."

Sufficient super specialists will never be created to provide that sort of quality of service, however, and such an attitude ignores the reality that many patients in district general hospitals have no neurological care. It also begs the question that a pure neurologist is necessarily the best person to look after some acutely ill people. Indeed, one professor of neurosurgery—an uninvited respondent and admittedly a notorious teaser of neurologists—wrote:

"My experience in the days before computed tomography was that many of the most rapid and competent referrals to neurosurgery came from general physicians. They were quick to spot that the case needed urgent investigation and to refer it directly to the neurosurgeon. Neurologists always tended to inject a delay into the system, and I believe that this is even worse now that computed tomography is available. In my experience, many neurologists are not comfortable with acutely ill patients with intracranial conditions, especially those associated with disease elsewhere in the body. Those that are might favour the kind of post you have in mind."

Despite the purist approach of some neurologists, others said that they would welcome the chance to do more acute work and regretted that they were excluded from the general take in rota.

"It is quite outrageous that acute neurology is [regarded as] general medicine in many areas such as ours, and neurologists are restricted by the take system to the management of subacute and chronic neurological disorders unless the medical registrar has the wit to realise he is out of his depth. . . ."

Most neurologists were, however, united in their strong objection to the idea of physicians with an interest in neurology, and although the next quotation is from an older neurologist, many letters of fierce opposition were received from those still in their 30s.

"There is no place for the man in the periphery, with a sideline in neurology, a sort of dilettante neurologist, with a fragmentary attachment to a special centre or unit to give some veneer of respectability. It would be a step back into the dark ages of prewar

provincial practice where a so called neurologist had to refer his cases to another 'proper' neurologist for either proper investigations or for the aid of greater experience. This would as suggested create exactly the state of first and second class neurologists that one finds in other countries."

Many neurologists believe that to have two classes of neurologist—the pure and the impure—would be divisive, and physicians with an interest in neurology would be seen as second class citizens. Many older neurologists went further and said that in their experience such physicians had been second class neurologists, and it was a very good thing that the breed had virtually died out. One professor of medicine took the trenchant, but perhaps realistic, view that there were already classes of citizens in all branches of medicine, but most held that physicians with an interest, at least in cardiology, gastroenterology, and respiratory medicine, in which specialties the posts are common, had equal professional standing with the pure specialist. A reasonable statement came from a neurologist:

"I do not see why there should be first and second class citizens—it is a question of two different jobs with different terms of reference. Some people rightly prefer to take a wide view of medicine and some a more specialised one. . . ."

In the list of arguments that I circulated I suggested that computed tomography had, to some extent, devalued clinical skills painstakingly acquired during a long training; no one agreed with this, and as one neurologist pointed out:

"I would not necessarily agree that computed tomography has 'devalued clinical skills.' I would venture to suggest that the potential 'physician with an interest in neurology' would end up shunting every patient through the scanner, 'just in case.' . . ."

A few respondents volunteered comments on research, suggesting that there should be better facilities for research at regional centres and that more research could be directed towards the study of stroke and the efficacy of rehabilitation. Two professors of medicine unkindly commented:

"There is nothing magical about neurology except perhaps the reluctance of many neurologists to be involved in research. . . ."

"I have found many neurologists totally divorced from the surge of basic scientific research now greatly influencing the practice of medicine as a whole. They appear isolated. I am sure that the practice of general medicine with the need to keep up to date creates a better scientific clinician, and an immensely better undergraduate teacher. . . ."

I did not invite answers to the crucial question—namely, how many neurologists or physicians with an interest in neurology, do we need? I suspect, though, that few neurologists would like to follow the course projected by Menken for his colleagues in the United States.^{2,3} He calculated that by 1990 there will be one neurologist for every 34 800 people—about 10 times greater than the present ratio in the United Kingdom. Kurtzke recently listed the main neurological diseases prevalent in the United States,⁴ and by assuming a similar distribution of disease in Britain I have constructed a table. I believe that the

Numbers of new cases of some neurological diseases per neurologist in United Kingdom each year

Disease	No of patients	Disease	No of patients
Stroke	550	Multiple sclerosis*	11
Epilepsy	180	Motor neurone disease*	7
Dementia	180	Infectious polyneuritis*	7
Transient ischaemic attacks*	110	Myasthenia gravis	1-2
Parkinson's disease*	70	Huntington's disease	1-2
Metastatic brain tumour*	55	Syringomyelia	1-2
Subarachnoid haemorrhage*	55		

Based on incidences given by Kurtzke⁴ and numbers of neurologists in the United Kingdom.⁵

*See text.

present regional neurological and neurosurgical centres provide first class care for those illnesses marked with an asterisk in the table. Other diseases, such as myasthenia, are so rare that there are good reasons for suggesting that research on them should be carried out primarily in national centres. Stroke, epilepsy, and dementia, however, are examples of illnesses so common that they can never be managed entirely within regional centres, and surely there is a case for providing wider and greater skill to manage them.

Isolation of neurologists

Neurology has become increasingly isolated from general medicine. In my view three historical accidents have contributed to this. The first was the initial genius of Charcot and his colleagues at the Salpêtrière, who distinguished a number of specific diseases from what had until then been regarded as the province of any physician. The second was the foundation of the National Hospital for the Paralysed and Epileptic, now the National Hospitals for Nervous Diseases; the qualities and energies of the consulting staff there seem to have inhibited the training of types of neurologists different from themselves. The third was the growth of neurosurgery and neuroradiology, which demand expensive and technical services that are, of financial necessity, limited to a few sites.

On reading through the replies from my colleagues I became increasingly disconcerted by the gap between how neurologists view their specialty and what professors of general medicine think neurologists ought to be doing. I see no reason why there should not be different types of neurologists trained to look after different aspects of neurological disease. The possibilities include neurologists for tertiary referral and research, neurologists working with neurosurgeons at regional centres, neurologists engaged full time in research, neurologists with special responsibility for rehabilitation, paediatric neurologists, neurologists interested in psychiatry, neurologists with an interest in general medicine, and physicians with an interest in neurology. We already have the first five—though there are very few neurologists specifically engaged in rehabilitation. Why not add

suitable training for the other possibilities listed? One professor of medicine wrote bluntly:

"Those who train postgraduates will have to come to terms with reality. By this I mean at the end of a training programme a specialist doctor should be equipped to provide the type of medical service which the National Health Service requires of him. To provide highly specialised skills may be a fascinating exercise for the department concerned and for the doctor who is being trained. If, however, the 'product' at the end of the line is a very specialised graduate who has been trained in excessive numbers for the needs of the service, this amounts to a kind of bad planning or thoughtlessness which can only lead to frustration for those fully trained doctors who cannot find employment. . . ."

One professor wrote:

"The trouble with neurologists is that they want to make neurology look too difficult for anybody else to do. They retreat into palaces of excellence where they undertake a number of highly technical procedures which are now so costly that they have distanced themselves from the day to day needs of a general hospital. . . ."

This may be a caricature of reality, but like all good caricatures there is an exaggeration of some recognisable features.

I am grateful to all those colleagues who took the time to reply to my unsolicited letter, and to the friends of the late Michael Wheeler for some financial help.

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MATERIA NON MEDICA

Heads you lose

The week, and the English Channel, before Normandy. A supreme summer Sunday: flat calm and a high heat haze all around.

In a fleet sweeper, my action station is in the sick bay—two bunks, a washbasin and a drug locker, port side midships—while a sweep is being carried out for some mines said to have been put down by E-boats the night before. Normally you don't pay much attention to action stations unless something real is happening, but the First Lieutenant is RN, likes things to be done by the book, thinks that the Channel is still the North Cape, where he got—and merited—his DSC, and today he insists. Nothing to be done, therefore, except sit in the sick bay, on the edge of the lower bunk, and get on with *War and Peace*.

The afternoon wore on, until there came the need to visit what the Navy called the heads. Even at the height of war, heads were, paradoxically, in the minds of the Admiralty and in their Lordships' hearts. There had been an Admiralty Fleet Order which arrived imperiously, in cipher, in the dark of the middle watch, stipulating the exact height the seat had to be above the deck: 17 inches, I think it was.

Ordinarily the sick bay heads is the personal fiefdom of the sick berth attendant—for his ease alone. But orders was orders, the officers' heads far away, behind not-to-be-opened doors and, whatever actions they may have been station for, action stations they were not. So the sick bay heads it had to be.

Having completed my trespass of that forbidden cabinet, there

was the need to dispose of what was there. In the officers' heads, starboard side forward, there was a proper chain, just like ashore. In the sick bay heads—nothing. Well, almost nothing: only a large, forbidding looking knob, on the bulkhead, painted red. Could it be? Perhaps it was. Might as well try. Push.

As the knob went in came the loudest bang I ever heard, all 17 inches of the heads shattering in adamantite Shanks of Barrhead porcelain splinters on the deck, alarm bells clanging, ship listing, engines dead, footsteps running on iron decks, and everything below in darkness. Just like me to push the wrong knob. Why had no one told me there was a large, red self destruct button in the loo?

Better stay mum. Pick yourself off the bulkhead, make your way quietly to the sweep deck, try to look nonchalant, hope nobody notices—and look over the side. Inky, oily water, still gently bubbling, all around.

Only a mine. One of those new ground mines, pressure mines, called Oyster. (Am I in breach of the Official Secrets Act? Do I get six months?) What a relief. Happily, nobody is badly hurt. Some leave begetting damage to a propeller shaft. Nothing more to do except brave the mess in the drug locker. Every bottle gone, a semi-liquid slurry of Admiralty remedies, balms from the Orient and the days of Nelson up to the latest vitamins and sulphanilamide—and the large bottle of ammonia (does anyone remember what ammonia was for?). But the naval gas mask is splendidly immune to NH_3 .

And that is how we didn't go the next week to Normandy.—FERGUS DONOVAN, neurosurgeon, Dublin.