

# Child neurology

At the hospital where I work, we have eight consultant paediatricians who have reached that age of maturity when pensions, if not a walking aid, loom ahead. On the other hand, we have recently placed three young trainees in jobs as consultant paediatric neurologists. This leads me to ponder the future of child neurology. My own mentors, such as Tom Ingram and Neil Gordon, trained in paediatrics and then adult neurology or vice versa, because there was no such specialty as child neurology. Their generation defined the disorders and the boundaries of the subspecialty. My own generation tries to encompass epilepsy, motor disorders, myology, neurooncology, neurodegenerative diseases, neurometabolic diseases, learning disorders, neonatal neurology, and so on, as well as trying to keep up with at first computerised tomography, then magnetic resonance imaging, evoked responses, single photon emission computerised tomography, positron emission tomography, magnetic resonance spectroscopy, and now the human genome. The march of knowledge outstrips the brain's capability, even with the help of computers, to assimilate and keep abreast of the whole field of neuroscience.

It has become obvious that specialisation into more and more specific areas for some aspects of child neurology is essential. And this prompts questions such as how many centres should have a specialist paediatric myologist with full laboratory and neurophysiological back up? Should there be a paediatric epileptologist in every major university centre; should they read and report on all the electroencephalograms and would separate paediatric neurophysiologists still be needed? Should only neurosurgeons with specialist training be allowed to operate on children's brain tumours or is there still such a person as a generic paediatric neurosurgeon; if so, should he/she be assisted by a paediatric neurooncologist who is a trained neurologist or oncologist? Dare we say that some neonatal neurologists have a limited view of the nervous system and might benefit from more training in neuroscience? Why are paediatric neurologists required to learn about adult neurology when adult neurologists learn by osmosis about concepts of brain development, congenital malformations, neurodevelopmental disorders, neurometabolic disease, or congenital myopathies? In addition, newer areas in child neurology are only just beginning to develop, such as brain and learning and brain and behaviour.

American health economists found the ideal system of healthcare to be universal for all citizens, comprehensive for all diseases, and a determined point of access to healthcare, i.e. it must include a primary care system. What decides the scope of such a healthcare system is dependent upon two factors, firstly, what diseases are

prevalent in that society, and secondly, what treatments on the best available evidence can be proven to be beneficial? It therefore follows that the provision and training of personnel, therapy services, surgery, and drugs should in an ideal world be available to all.

It is easy for government health departments, medical councils, audit groups, and national institutes of clinical excellence to talk of the importance of clinical governance, evidence-based medicine, clinical audit, continued medical training and retesting but this is often prompted by some national catastrophe rather than a planned strategy to help professionals keep abreast of advancing knowledge. There is still no automatic way in which a clinical management system or proven therapy once agreed becomes available to all children, no matter in which part of Europe or the USA they live.

Much of the management in childhood disability, however, falls within what has been called an 'evidence free zone'. How do we arrive at an evidence-based proof? This proves to be a difficult task for journal editors because any new treatment will at first be anecdotal. Treatments such as the Peto method of physical therapy, botulinum toxin, dorsal rhizotomy, and intrathecal baclofen need to be reported first as personal experience, often without controls or values of statistical significance. Only after hundreds of treatments and many articles may a metaanalysis show the treatments to be of value in certain circumstances.

Young paediatric neurologists just starting out face a very different scenario compared with their predecessors. They must continue to have a good grounding in basic science but they should stimulate and be stimulated by the neurosciences, through neuropsychology to neurophilosophy (editorials).

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