

Editorial

The Development of Neuroradiology in the United States

The concept of subspecialization within radiology began to take shape more than 30 years after the discovery of the roentgen rays. Probably the ideal of specializing in the radiology of the nervous system was the earliest one to occur. Contributing factors were the first "special procedures" in diagnostic radiology (pneumoencephalography, cerebral angiography, myelography) and the spectacular development (and accompanying glamour) of neurological surgery under the impulse of Harvey Cushing and others in the second to the fourth decades of this century. Dr. Cornelius Dyke was the first full-time neuroradiologist in the United States. He joined the Department of Radiology at the Neurological Institute of New York in 1929, after having trained at the Peter Bent Brigham Hospital where he was stimulated by what he saw there in radiology of the nervous system in Harvey Cushing's service. His untimely death in 1943 at the young age of 42 cut short what promised to be a brilliant career. Undoubtedly, Dyke would have trained others in this field and, indeed, his prized pupil turned out to be the late Ernest H. Wood who, on returning from military duty after World War II, assumed the position of Director of Radiology at the Neurological Institute. Dr. Wood's exposure to Dyke's expertise was brief as a radiology resident, lasting only a few months. At the time that he left to assume the Chairmanship of Radiology at North Carolina in 1952 he had trained no one in the field of neuroradiology, but I personally had the good fortune to work under him as a staff member for 6 months.

An important problem affecting the education of individuals in this field related to the fact that training had to come after the completion of a residency and, given the great scarcity of radiologists prevailing during the decades of the 40s to the 60s, there was no hope that an individual would forego making a good living after the completion of his residency to obtain subspecialty training *for which there were no funds*. Consequently, only individuals who were appointed to the staff of departments and were assigned duty in the neurological area for a period of time had any opportunities to obtain postresidency experience.

Much had been done before the 50s to demonstrate the importance of radiologic diagnosis in the management of the neurological patient, a fact well recognized by the neurologists and particularly by the neurosurgeons. In this country, Leo M. Davidoff, a neurosurgeon, had written extensively in this field, and had given his support and was responsible for awakening an interest in neurological radiology among the general radiologists in the hospitals with whom he was associated. But in the absence of any formal training, for a long time it remained just that—general radiologists with some interest in neuroradiology—without any possibility of developing real specialists in the field.

This lack of training opportunity was recognized by the National Institute of Neurological Diseases and Blindness (NINDB). A decision was made by the National Advisory Council of that Institute to support training in neuroradiology which was to combine clinical and research training, similar to established training programs in neurology and neurological surgery. Training grant support began on July 1, 1960 with two programs: one at the Albert Einstein College of Medicine under Manny M. Schechter and the other at the Neurological Institute of Columbia-Presbyterian Medical Center under my guidance. At the same time, the two program directors were made members of the Training Grant committee of the NINDB. Membership in this committee provided the neuroradiologists with the opportunity to learn about and to apply standards prevalent in other training programs (in neurology, neurosurgery, neuropathology). The training grants provided partial salary support for staff instructors as well as some minimal support of laboratory and clinical research.

The most important component of the program, however, was making available Special Training Fellowships to qualified individuals who had completed their training in general radiology as specified by the American Board of Radiology. The individual as well as the training environment were carefully reviewed by the Committee before a fellowship was awarded.

It is interesting to note that almost immediately after the

establishment of these fellowship programs, a significant number of individuals expressed a desire to obtain postresidency training in neuroradiology. In the early period, much advice was required to establish the programs and to guide the fellowship applications through the review committees of the NIH. The entire subspecialty of neuroradiology is deeply indebted to Mrs. Elizabeth Hartman (Chief, Training Grants and Awards) and Dr. Murray Goldstein (Director of Extramural Programs) for their untiring efforts on behalf of the training programs of the NINDB (now NINCDS—National Institute of Neurological and Communicative Disorders and Stroke). Thus, I would state emphatically that without this support of the National Institute of Neurological Diseases and Blindness neuroradiology would not have developed in the United States or at least its development would have been hampered and delayed. This is an excellent example of Lincolnian democracy at work: "government should do for the people that which they cannot—or would not—do for themselves." Support from the NINCDS is no longer necessary because the specialty of neuroradiology has been accepted and the needs recognized by the hospitals and universities. The American Society of Neuroradiology has established training standards to accompany its well defined membership requirements. At present there are 64 training programs offering a total of 105 fellowships.

With the period of accelerated growth of our specialty which has lasted now for 20 years, publication of the *AJNR* is a natural evolution; it will tend to affirm the importance that neuroradiology has been acquiring as an interdisciplinary specialty of medicine.

The American Society of Neuroradiology can be proud of its accomplishments. In a short span of some 17 years since its founding in 1962, it has become one of the strongest and most vital societies within radiology. Being in an interdisciplinary field, its future growth and its accomplishments will depend on the ability of its members to take advantage of the research opportunities offered in the imaging field as well as on the effective collaboration with neurologists and neurological surgeons in order to be able to apply the latest technical developments for the benefit of the patient.

It is our earnest desire that the *AJNR* will fulfill the promise, and the hope, to become the *true voice of neuroradiology* in North America, a journal of which the Society can be proud. It cannot accomplish this dream without the full support of the Society. Let us put all of our strength and enthusiasm behind it.

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