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Visiting with Dr. Ralph Heinz

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Visiting with Dr. Ralph Heinz

On a lovely late summer afternoon, I walked 2 blocks up the hill from my house to see Dr. Ralph Heinz. Dr. Heinz lives in what is—at least in my opinion—the perfect professor's house in a college town. A well-tended lawn fronts a medium-sized house painted yellow-cream with brown shutters and an orange front door, a color scheme that works beautifully. At 82 years of age, Dr. Heinz is thin and fit, his mind sharp as ever. He obtained an MD from the University of Pennsylvania, did his radiology residency at the Philadelphia General Hospital (no longer in existence), and was a fellow in neuroradiology with Dr. Juan Taveras at the Neurologic Institute at Columbia University in New York City (1962–64). His career has taken him to Atlanta, New Haven, Pittsburgh (where he was Chair of the Department of Radiology at the University of Pittsburgh), and, last, to Durham, where, up until recently, he was a Professor at Duke University. He is a former ASNR Vice President and its Gold Medal recipient (2004). Rather than making this a formal biography and interview, I posed several questions to Dr. Heinz and asked him to reminisce freely and informally. My purpose was to get a feel for his life in relationship to the growth of our specialty and that of ASNR. This is my last “Perspectives” pertaining to the lives of neuroradiologists whom I feel have not been properly acknowledged in AJNR, and, with it, we bring to a close the celebration of ASNR's Golden Anniversary.

M.C.: Can you briefly tell me about your life before medicine, that is, growing up during the Great Depression and your involvement with basketball?

R.H.: My family came from Cleveland. My father was an engineer who was out of work for 2 years during the Depression and then got a job with Union Carbide in West Virginia. There, as I was tall, I started playing basketball. I got better with time and eventually went to college on a basketball scholarship. This was the year after World War II and all the returning veterans were back, so I was an 18-year-old among 23- and 24-year-olds. My life was divided between sports and premed.

M.C.: What sparked your interest in medicine?

R.H.: I had an open fracture in my left leg when I was 6 years old, was in the hospital for 6 weeks, and had 3 surgeries. That was my first contact with doctors. I went to medical school in Philadelphia (1951) but, at the same time, continued playing basketball with a semiprofessional team. I managed to do both for a while and then medicine took over my life and I was forced to give up basketball.

M.C.: You were present at the beginning of modern neuroradiology in the United States. Who and what was responsible for it?

R.H.: I was deferred for the Korean War and, after graduation from the University of Pennsylvania, I was stationed at the USPHS Hospital in Staten Island—as a surgical resident—to pay back my service obligation. Dr. Juan Taveras would come over every 2 weeks and give a conference; I was amazed with what he could do with arteriograms and pneumoencephalograms! But I was still torn between internal medicine and radiology, so I went to the University of California in San Francisco and did a year of medicine. Later, a desire to do

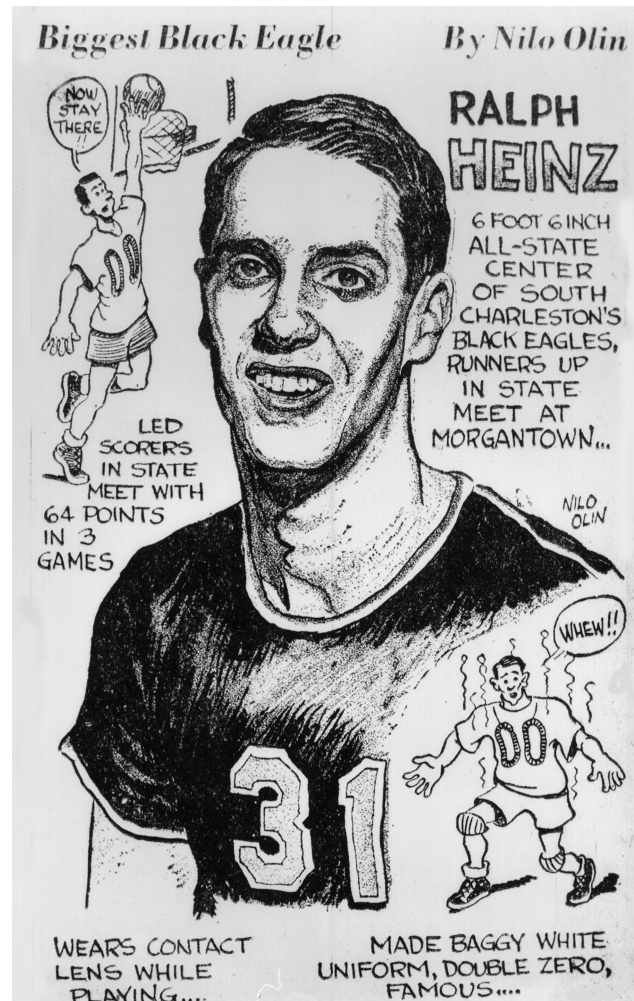


Fig 1. Drawing of Dr. Heinz at the time when he led his high school team to the state championship basketball game and was named All-State Center. He set a new scoring record of 35 points in one game, when the typical total game scores in that era averaged in the mid-40s.

things with my hands, my love of diagnosis, and improvements in fluoroscopy, such as image amplifiers, led me to accept a 3-year residency in radiology back in Philadelphia. I thought that the future lay in avoiding exploratory surgery by using external diagnostic techniques like x-ray, isotopes, angiography, and developing instruments like catheters and long needles to work inside the body from the outside.

M.C.: How did you become Dr. Taveras's fellow and what was it like to be trained by him?

R.H.: Toward the end of my residency in 1961, I drove up to New York City to get reacquainted with Dr. Taveras. This visit led to my fellowship in neuroradiology with him in 1962–64. The National Institutes of Health (NIH) had created 7 institutes and one was called the National Institute of Neurologic Diseases and Blindness. The first group of Special Fellows included Drs. Kricheff, Leeds, Brinker, and Goldberg. We received about \$13 000 a year from the Institute. Dr. Norman Chase had trained with Dr. Taveras before the development of the Special Fellowship awards and he went on to become the Chair at New York University. Juan was neuroradiology's first representative to the NIH. In 1966, he sponsored me to succeed him on the NIH training committee, after which I made



Fig 2. Recent photograph of Dr. Heinz while on vacation in Mexico.

many neurologic science site visits to universities all over the country. Our job was to determine priority scores so we could award the NIH money appropriately.

M.C.: What was a normal day like while a fellow with Dr. Taveras?

R.H.: We started at 8 a.m. with a schedule that included 3–6 diagnostic angiograms, 4 myelograms, and 3 pneumoencephalograms. Most of the procedures were done by neurosurgeons, with an occasional air study by a neurologist. Dr. Taveras had a rule that if the clinical trainee did not start the procedure within 30 minutes of the patient arriving, we would take over and do it. Also, we did all of the trauma cases on call or at night, as the neurosurgery residents were busy doing other things during that time. By the time I finished my fellowship, we radiologists were doing all of the procedures.

The work continued throughout the day but the 2 fellows not assigned to procedures were assigned to research (we each had our projects). Like clockwork every day, Dr. Taveras would come down to the reading room at 3 p.m., dressed very formally in a long white coat. He would spend about 3 hours with us interpreting the studies. He was simply fantastic at it. He would pay \$5 to anyone who found an abnormality he missed and 50 cents for every finding that he had seen but was mentioned by someone before him. It was just a standing joke, he would have paid, but he never had to!

After the fellowship, we all stayed in touch with Dr. Taveras. In 1982, we had a banquet for him in Chicago at the Pump Room. It was like a papal visit. Everyone wanted some time with him, everyone wanted to touch him, press the flesh with him one more time.

M.C.: Here I have to ask you about Dr. Ernest Wood, who

used to live only a few houses away from where you now live and was a former chair at my own institution and at the Neurologic Institute. What do you remember about him and his contributions?

R.H.: Dr. Taveras started his review course in the late 1940s or early 50s and Dr. Wood used to come up to lecture. While I was in New York, the two of them were writing their famous book. Dr. Wood would come to the city from North Carolina on Fridays and they would work all weekend on the book, which came out April 1964. Dr. Taveras gave each of us a copy; it was a great moment for him and for us. When Dr. Wood went back to Columbia University, I was in Atlanta and he tried to recruit me, but I took a position at Yale University.

M.C.: Why Atlanta after growing up in the Mid-Atlantic region? Your resume states that you were Chief of “Special Procedures” there and not Neuroradiology. . . .

R.H.: I went to visit Freddy (Dr. Gargano) and Dr. Parks, Chair of Radiology at the University of Miami before Dr. Viacomonte. As it turned out, they wanted me to do chest radiographs and not just neuroradiology. So, on my way back, I stopped in Atlanta and introduced myself to Dr. Weens, Chair at Emory University at the time. All institutions were recruiting neuroradiologists; all you had to do was call and ask! While at Emory, I did all angiograms, not just neuroradiology. That is why I was called Chief of Special Procedures. My most distinguished fellow was Dale Cooper—who died prematurely—and for whom there is a named lectureship at Emory each year. Dr. James Hoffman was not my fellow, but he was always with us and learned a lot. He later became Chief of Neuroradiology there.

M.C.: After Atlanta, you became Chief of Neuroradiology at Yale University, and after a short 2 years, you were selected as Chair of Radiology at the University of Pittsburgh. What was responsible for such a rapid ascent? Did you meet Dr. Robert Shapiro while at New Haven?

R.H.: Dr. Taveras appointed me as his successor at the NIH, so I felt that I had to do a higher caliber of neuroradiology. This led me to New Haven. All of a sudden, I was thrown into the national scene and I liked it; I thought this was for me! When I went to Yale, I replaced Dr. James Scatliff, who left to become Chair at the University of North Carolina. All universities were interested in neuroradiology and I got an offer from Pittsburgh. They had a huge neurosurgical service and were about to recruit Dr. Peter Jennetta, whom I knew from Philadelphia. I knew Dr. Robert Shapiro in New Haven and I talked to him about being a Chair (he had just come back from Boston, where he was Chair at the Beth Israel Hospital for a short 2 years). After consultation, I did take the position at the University of Pittsburgh, where we created a team that included Drs. Kerber, Rosenbaum, Bank, Drayer, and Horton. Our neuroradiology team won each of the 4 major prizes offered by ASNR for scientific research in the 2 years 1977–78. (**MC:** Dr. Heinz stressed that he considered the success of what he built in Pittsburgh one of his most important achievements.)

M.C.: While you were Chair at Pittsburgh, CT was developed. How did it change neuroradiology? How did you hear about it?

R.H.: We had 2 CT units out of the first 5 in the United States (other locations: Mayo Clinic, Massachusetts General Hospital, and Rush-Presbyterian in Chicago). In 1969,

Dr. James Bull showed some early rudimentary images at a conference at Albert Einstein Hospital in New York, and that is when many of us decided that we needed to get this type of equipment into our institutions.

Dr. Heinz's CV lists more than 130 peer-reviewed publications. In 1967, he recognized and publicized the angiographic diagnosis of dural and cortical vein thrombosis, which, at the time, was thought to be made only postmortem. This angiographic diagnosis meant that these patients could be saved. In 1968, Dr. Heinz developed the C1–2 spinal puncture, used all over the world. He was the first to note the increased CSF in patients with increased endogenous and exogenous corticosteroids, which led to understanding the mechanism and reversibility of pseudoatrophy with steroids and bulimia. He wrote the definitive paper on the classification of white matter diseases in infants and children. Within months of the appearance of the MR imaging machine in 1985, he described the increased T2 signal intensity so important in the diagnosis of hippocampal sclerosis; this finding led to much better selection of patients for curing temporal lobe seizures with lobectomy. I find it amazing that, in 1978, he was using CT to study brain perfusion and that, in 1984, he studied carotid artery atheromas with CT. Other publications that are worth mentioning here include ones about the applications of image intensifiers in neuroradiology, putting together—and in the right perspective—the constellation of findings due to neonatal hypoxia, and recognition of antiphospholipid antibodies as a cause of arterial and venous occlusive disease (an observation that later led to several important articles by one of his colleagues, Dr. Provenzale). After working with Dr. Kerber, he went on to pioneer interventional neuroradiology in the Southeast. In 1978, he traveled to Paris to study balloon occlusion of carotid cavernous fistulas with Dr. Debrun, who had learned it from Dr. Serbinyenko in Moscow.

M.C.: What role has ASNR played in your life? How do you see it now that it has reached its Golden Anniversary?

R.H.: I was a first-year fellow in 1962 when ASNR was founded and was not at Keen's restaurant when it was initially discussed. Once a fellow, you immediately became a member-in-training, as is still done today. I went to give a paper on myelography at the third meeting in Atlantic City and there was a total of 18 neuroradiologists there! Imagine how sparse it was at the beginning compared with today.

M.C.: You were one of the first pediatric neuroradiologists. What led you into this subspecialty?

R.H.: I was not formally trained in it but shared a close

working relationship with Dr. John Caffey, both at Columbia and, later, at Pittsburgh. At that time, the procedures were done under local anesthesia, so we served as the radiologist and the anesthesiologist. While at New York, about a third of my work was on babies, so I got very good at that.

M.C.: After working in the South (Georgia) and then moving to the Northeast (New Haven) and the Mid-Atlantic region (Pittsburgh), you decided to come back again to the South, why?

R.H.: I worked very hard as the Chair in Pittsburgh and, after 10 years of doing it, I was tired and I had stresses at home. I came down to manage neuroradiology at Duke University in 1978. At that time, Duke had excellent neurosurgery and neurology departments and it was time for neuroradiology. Burt Drayer joined me there on the faculty once I had organized the section.

M.C.: What would you tell someone who is planning on embarking in neuroradiology?

R.H.: You have to have an abiding desire to study the brain. Nanotechnology will certainly change the way we look at diseases and treat them. Functional imaging has given us great insights as to how the brain works, but of course we need to train differently to understand and use it. This includes knowledge of psychology and psychiatry. We are at the threshold of the most exciting times for neuroimaging. The purpose of all this is to bring a multidisciplinary approach to brain function.

M.C.: You seem to have handled retirement very well and gracefully. Any advice on that?

R.H.: Have an interest outside of medicine before you retire! I do sports, I write, I am very interested in public policy, health, and otherwise.

As I was walking home from the interview, I suddenly felt a sense of historical continuity. Despite the 3 decades that separate Dr. Heinz and I, we know or have known, have worked, and are friends with many of the same individuals. Our common ground is not only the specialty of neuroradiology but also its history, and we have a duty to preserve both. Some individuals, like Dr. Heinz, have been lucky to see the birth, and now the Golden Anniversary, of our scientific society. How will our centennial be celebrated? I do not know, but I hope that our common history will again bring us together to honor those who deserve it.

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