Radiology: 100 Years of Achievement

ACR Bulletin
June 1995

Hartman Lecture
Raymond A. Gagliardi was the Radiology Centennial Hartman lecturer at the 1995 ARRS meeting last month.

Dr. Gagliardi served as chief of radiology at St. Joseph Mercy Hospital in Pontiac, Michigan for 33 years. He has served as president of the Michigan Radiologic Society and received its Distinguished Leadership Award in 1987.

He has served the ARRS as a past president, secretary and chairman of the Publications Committee. He was awarded the society's Gold Medal in 1989.

Although retired from active practice and active participation in the governing committees of the society, he still offers advice to those who succeeded him. He now serves as the society's official historian. Dr. Gagliardi has played a pivotal role in planning for radiology's centennial, serving as second vice-president of RCI and chairman of the Publications Committee. He will be giving five named lectures during the centennial year.

The following are excerpts from his Hartman lecture, "Radiology: A Century of Achievement."

By this time, you have all heard the story of the work of Wilhelm Conrad Roentgen and his famous announcement of a new kind of ray which changed the face of medical practice forever. It is unlikely that this announcement by an obscure German physicist would have been taken so seriously except for the fact that the announcement was made to the Physical-Chemical Society of the University of Wurzburg and a century ago, German science was preeminent in the world. From Vienna the news spread all over the world and as early as January 6, 1896, the New York Sun reported a "marvelous triumph of science." The ability of the rays to penetrate living human flesh was reported but the potential for the uses of the rays remained unfocused without any indication that the most important utility of these rays was to be in medical practice. Immediately, unlimited uses were projected with the sale of ray-proof underwear and the establishment of epilation clinics. Public confusion mounted but there was no medical organization with sufficient influence to take control. The American Medical Association, the largest medical organization in America, numbered only about 10,000 members, most of whom had absolutely no interest in the new ray. Electricians, photographers, physicists and electrotherapists all became involved in one aspect or another but there was no organization which could accommodate these widely divergent interest groups, each group with even more widely divergent educational and ethical backgrounds.

In was in 1896 that for the first time the most important problem which would plague radiology throughout its long history became a major threat. This is the problem we refer to now, 100 years later, as the problem of "turf." In the midst of this confusion, Dr. Heber Robarts, an eclectic practitioner of electrotherapy who had served as an inspector of mine sanitation and also as a surgeon in the railway systems of the West, started in 1896 a publication, the American X-Ray Journal, wholly owned by him, to encourage medical interest in the x-ray. Although societies of x-ray physicians were already established in Europe and Britain,
the idea of forming an x-ray society in North America originated with Dr. John Rudis-Jicinsky, a general practitioner in Cedar Rapids, Iowa. In 1899, he wrote to Dr. Robarts suggesting the formation of such a society of physicians and any others interested in the medical uses of the x-ray.

Fifteen potential members, all physicians, appeared at the first meeting and agreed to form the Roentgen Society of the United States, with Robarts as its first president and Rudis-Jicinsky as its first secretary. Membership was open to anyone with or "without credentials if they are members of medical or other scientific societies." At the first meeting, the name of the society was changed to the American Roentgen Ray Society. This change was strictly for practical considerations, namely to encourage the affiliation of Canadian physicians.

Early membership included many non-medical groups, including manufacturers of electrical or photographic equipment and some outright charlatans. The founders tried to protect the scientific integrity of the society and in 1905 they expelled one-third of the membership. The newly reorganized ARRS, led by Preston Hickey of Michigan, set a goal of establishment of radiology as a separate and distinct specialty with the same standing and respect accorded to the established specialties of surgery, obstetrics or medicine. Along with scientific respectability, there was a need for medical control of the x-ray. Implicit in that turf battle of almost a century ago was that victory would go to those who did the job best. Nothing has changed.

Dr. Albert Soiland, a radiotherapist from Los Angeles and a president of the RSNA, realized that organizing radiologists was meaningless unless the entire body of American medicine could be persuaded that the goals of radiology were consistent with those of medicine in general. Dr. Soiland encouraged radiologists to offer enough scientific papers to the AMA Scientific Program Committee so that it was deluged with quality communications which took over the program. In response to this and the aggressive support of both the ARRS and the RSNA, a Section Council on Radiology was approved and the AMA indicated that radiology should only be practiced by those with training and special expertise in the specialty. This milestone in the history of the specialty must stand as the second most important turf battle ever waged and won.

In the late 1920s and early 1930s, all the medical specialties were discussing ways to identify a specialist other than by self-proclamation or by one's local reputation. The concept of an examining board to set standards of training in a specialty and then to examine the trained candidate gained momentum. The first such board, the American Board of Ophthalmology, began its work in the early 1930s. With its organization in 1933, the American Board of Radiology established standards for minimal training and for oral examinations before a physician could call himself a certified radiologist. Again the Board was trying to protect the public against irresponsible and unqualified practice but, at the same time, establish our own standards to protect our own "turf."

The 50 years since the end of World War II have seen the greatest explosion in services provided by the radiologist since Roentgen's discovery - the development of radiation oncology, the CT scanner, magnetic resonance imaging, ultrasound, nuclear radiology and interventional radiology. While we have enjoyed our triumphs in extending the utility of our new skills and have enjoyed commensurate economic rewards, we have also created a turf problem as great as that which faced the founders. We have become, in a sense, the victims of our own success.
By looking backward with an understanding of what has been accomplished but with an appreciation of what must still be done, the radiologists celebrating our specialty's second centennial will know that once you looked backward and realized how far forward you could see.

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