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NEWS

THE UNIVERSITY OF TEXAS
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MEDICAL SCHOOL AT DALLAS



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WASHINGTON--Nuclear medicine, beneficial offspring of the awesome atomic age, has undergone astonishing growth that has brought it in just 20 years "from the curiosity to the commonplace," a Dallas medical professor said here today.

But, said Dr. Frederick J. Bonte, the results of these two decades of medical progress still are not available to many patients who need them.

More physicians must be trained in this specialty, and a national review board is needed to provide "some coherent means" of evaluating the competence of those trained, he said.

Dr. Bonte, professor and chairman of radiology at The University of Texas (Southwestern) Medical School at Dallas, made the comments in a paper scheduled for delivery (EDS: between 1:30 and 3:45 p.m. July 10) before the Society of Nuclear Medicine, meeting in the nation's capital.

Some 1,500 research scientists and practitioners of nuclear medicine, which involves the use of radioactive materials in the diagnosis and treatment of disease, are attending the 17th annual meeting of the society at the Sheraton-Park Hotel. Glen Seaborg, chairman of the Atomic Energy Commission, and U.S. Sen. Ralph Yarborough (D-Tex.) are among the other speakers at the event.

Dr. Bonte documented the explosive expansion of nuclear medicine:

"Fifteen years ago, perhaps 500 American hospitals were served by 500 physicians who were licensed to use radioactive material in medical practice. It is estimated that during the year they performed 200,000 patient tests.

"During the past year, 2,000 licensed physicians served 5,000 hospitals, and they offered almost eight million tests to some four million patients, within the framework of nuclear medicine."

Parkland Memorial Hospital in Dallas, which was making "about 100" radioisotope tests per year 15 years ago, conducted some 8,000 such tests last year. Johns Hopkins University hospital was making no radioisotope scan tests in diagnosis 15 years ago but now gives some form of this test to one out of every four patients, Dr. Bonte said.

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first add dr. bonte

The tests which comprise nuclear medicine have succeeded "because they are rapid, effective, safe and inexpensive, and may be made without discomfort to the patient," Dr. Bonte said.

But nuclear equipment and radiopharmaceuticals are usually found only in larger hospitals and in a few physicians' offices, he said, noting that "ingenious attempts" are being made to repair defects in distribution.

"In several communities, physician-supervised mobile radioisotope laboratories are in operation, bringing a great variety of tests, even including radioisotope scanning, to patients in smaller hospitals and nursing homes, and perhaps, ultimately, to rural communities and even the patient's own home."

From its beginning, Dr. Bonte pointed out, nuclear medicine has been a team effort requiring skilled physicians, physicists, pharmacologists and a core of trained technologists.

"In patient care, ever-increasing skill is demanded of the practitioner of nuclear medicine," he told the group, "and there must be some coherent means of training many physicians in this kind of task, and for evaluating the competence of those who have been trained."

In recognition of this, he said, the Society of Nuclear Medicine proposes creation of an American Board of Nuclear Medicine to set the standards for training of nuclear physicians and allied health specialists. The board would also examine and certify the competence of physicians engaged in nuclear patient care.

Already more than 40 residency training programs in nuclear medicine exist in medical schools and teaching hospitals, including UTSMS and Parkland Memorial Hospital in Dallas, he pointed out.

Dr. Bonte said nuclear medicine as it is known today began with the discovery of man-made radioactive elements about 35 years ago, and received its principal thrust with the World War II development of the nuclear reactor.

Ironically, he recalled, nuclear medicine failed to live up to some over-optimistic predictions made for it after the war, when the newly created Atomic Energy Commission set up numerous laboratories in universities and medical schools around the country.

"It was felt that medicine was about to be transformed. Cancer, it was said, would soon be abolished as a threat to human life with radioactive chemicals and drugs."

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second add dr. bonte

"The disappointment of finding that this was not to be, and that radioactive materials would contribute only modestly to the treatment of human disease, was never keenly felt," he said, "for the new research laboratories gave birth to an amazing series of ways to investigate, and to diagnose, human disease."

Foremost among these diagnostic tests are radioisotope scanning, which utilizes the radiant energy from tracer substances to make pictures of internal organs, and the use of radioactive tracers to measure the volume of body fluids such as blood and the cells within it.

Such elusive medical problems as brain tumors and pulmonary embolisms, potentially disastrous clots in blood vessels of the lung, can be pinpointed quickly by nuclear techniques, Dr. Bonte said, "and the proper treatment of a life-threatening situation may begin at once."

He said a pulmonary embolism appears as "a hole in the midst of the normally uniform pattern of lung circulation" under scrutiny of a radioisotope camera after radioactive tracer materials have been injected into the blood.

A brain lesion similarly appears as a "hot spot" on an isotope scanner, with radioactive tracer materials concentrated in the abnormal tissue, he said.

Radioactive iodine helps measure activity of a thyroid gland suspected of abnormality, Dr. Bonte said, and when hyperthyroidism is detected the radioactive substance may be used to return the patient to normal.

Many tests no longer even require presence of the patient, Dr. Bonte pointed out. Radioactive tracers can be administered to a sample of the blood, with medical deductions drawn from the amount of the tracer which ultimately reaches a detecting device.

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