President's Lecture

10-Year Progress in Nuclear Medicine

Shujiro OKAMOTO and Hiroyasu MURAYAMA
The Department of Radiology, Tokyo Medical College

One of the reasons we have selected the theme of "10-year progress in nuclear medicine" is because there already is a detailed historical record of nuclear medicine in Japan upto some 10-odd years ago under the title of "10-year progress in isotopes" issued by the Japan Isotope Association. Another reason is that this year happens to be the 10th year since the inception of the Department of Nuclear Medicine in our medical college and taking this opportunity, we wanted to retrospect the progress of nuclear medicine achieved during recent 10 years. We have reviewed the titles and contents of works published at the general meeting of the Japanese Association of Nuclear Medicine during the past 10 years and at the same time studied 10-year progress in our Department of Nuclear Medicine.

First of all, we wish to mention a few points worthy of particular note about the presentations made at the general meeting of the association during 10 years since 1967.

1. The number of presentations, which was some 150 pieces in 1967, was increased to 210 in 1972 and is getting close to 300 in recent years.
2. When it comes to the contents of communications, instruments and apparatuses reportedly are being improved year after year and particularly, computerized methods of image processing are now being utilized rapidly with a forward posture attitude. As regards methods of measurement, on the other hand, in vitro techniques and RIA are on the rapid increase and, according to the Japan Isotope Association, there are 355 institutions utilizing in vitro assay methods alone and 470 which are utilizing both in vitro and in vivo assays.

Concerning radiopharmaceuticals, utilization of Tc-99 m and Xe-133 is on the rapid increase and, according to the Ministry of Science and Technology, the annual usage of Tc-99 m is reported to be as much as 750 Ci. What can be considered as an outstanding feature in the field of radiodiagnostics is a rapidly increasing number of reports dealing with the heart, lungs and blood as well as digestive tract including the liver and bile ducts.

3. A few points worthy of mention about the progress of the Department of Nuclear Medicine of our medical college will be referred to. At the outset we were equipped with a 5-inch ϕ dual scintiscanner, renograph, liquid scintillation counter and others; in 1973 a scintillation camera was added to our armentarium and since then new equipments have been installed one by one. At initial stages of our activity we performed R.I. examination in about 1,000 persons per year. But the yearly number of subjects was progressively increased thereafter to as many as about 9,000 last year. To be noted is the fact that the frequency of in vitro studies and the kinds thereof have been greatly increased (some 80 per cent of patients seen at the departments of internal medicine and surgery underwent in vitro R.I. study). Thus, the Department of Nuclear Medicine of our medical college has played an important role in education, research and treatment and we have accomplished a total of 165 works, published in the form of communications to medical societies, articles to journals or monographs.

We have outlined recent 10-year trends of nuclear medicine in Japan as well as in our department of nuclear medicine. As can be noted, the progress of equipments and measurement methods, the development of radiopharmaceuticals and the rapid advance in their use for diagnostic purposes and in in vitro studies, and a number of valuable research works during this past 10-year period have made really great contributions to the development of nuclear medicine in our country. We earnestly hope that further stepped-up progress will be made in this field of medical sicence in the years. ahead.