

《招待講演》

Future Trend of Nuclear Medicine in Korea

Myung Chul Lee, M.D.

Seoul National University Hospital
Seoul, Korea

Since the Korean Society of Nuclear Medicine was organized in 1961, nuclear medicine was made consistent promotion for last 40 years. In Korea, the number of medical institutes handling radioisotope is 120, which shows gradual increase. Now 112 institutions were found to conduct *in vivo* nuclear medicine studies and 84 institutions are performing *in vitro* examinations.

Most of the radioisotopes utilized in our country are purchased from abroad (4000 Ci every year) for diagnostic tests. The number of *in vivo* studies is about 0.32 millions per year, which is 1.5 fold larger compared that of 5 years ago. The number of radioimmunoassay is 7.7 million studies, showing 1.8 fold increase. According to the type of the *in vivo* study, liver scan decreased while bone scans, SPECT and PET studies have rapidly increased. The radioimmunoassay for liver antigen/antibody assays became the main studies in the early 80s, while thyroid function tests and tumor marker assays have been continuously increasing in 90s. Regarding to the nuclear instruments, there are 196 gamma cameras, 6 PET cameras, 174 computer systems, 127 gamma counters, 28 beta counters and 72 automatic RIA processors distributed around the nation. In particular, the installation of SPECT machines have been rising rapidly. Currently we have 46 dual head and 10 triple head SPECT machines.

Particularly, scientific activity of nuclear medicine in Korea was quite progressed remarkably in recent 5 years. For example, 85 papers from Korea were presented at annual meeting of Society of Nuclear Medicine in 2001, which is the 4th largest in the world. The most contributing factors for the recent development of nuclear medicine in Korea are wider utilization of SPECT for neurological and cardiovascular disorders, more widely employed multi-head SPECT, production of more domestic radionuclide or radiopharmaceuticals, promotion of PET technology, full support from Government and, more than anything else, establishment of Korean Board of Nuclear Medicine. Right now five PET centers are operating and two more PET centers will be established in 2001. The number of PET studies was around 4,400 in 2000. At the beginning, major application field was brain PET. However, the application in oncology has grown continuously up to 63%.

Future perspective for nuclear medicine in Korea appears definitely promising even though there are some obstacles to further development. Korean Government already established comprehensive promotion plan for utilization, research and development of radiation and radioisotope by virtue of leading country for nuclear power status around the world as shown 43% of nuclear share of electricity generation. This plan is including R & D grant expansion, enhancement of domestic production of radioisotope, radiopharmaceuticals, new radionuclide for treatment and nuclear instrument. We are planning to establish multiple regional cyclotron and PET centers throughout Korea for promotion of PET application and molecular nuclear medicine technology. Korean Society of Nuclear Medicine expected to be very active for international cooperation because Korea became host country of WFNMB for 2006 world Congress and ARCCNM (Asian Regional Cooperative Council for Nuclear Medicine) for promotion in conjunction with IAEA, SNM and JSNM.