Routine Work and Research Work in the
Central Clinical Radioisotope Division

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The Central Clinical Radioisotope Division of the Kyoto University Medical School is the clinical service unit for the routine work by using radioisotopes. Therefore, how to distinguish the relation between the routine work and research work and how to progress in the research work are the problems in this division.

I would like to introduce the present condition of this division and to present our hopes as to the development of this division in the near future.

The Central Clinical Radioisotope Division was started in April, 1965. The members consist of three doctors and five technicians. The present routine work is as follow:

Thyroid gland
1) Thyroid $^{131}$I uptake
2) Thyroid scintigram
3) Thyroid Resin Sponge Uptake

Blood organ
4) Half-life of $^{51}$Cr-red cell
5) Blood red cell volume by $^{51}$Cr-red cell
6) Spleen scintigram
7) Ferrokinetics by $^{59}$Fe

Liver
8) Liver blood flow by $^{198}$Au
9) $^{131}$I-Rose Bengal excretion test
10) Liver scintigram

Digestive organ
11) $^{131}$I-Triolein absorption test
12) $^{131}$I-human serum albumin absorption test
13) $^{131}$I-Polyvinylpyrrolidone excretion test
14) $^{59}$Fe or $^{55}$Fe absorption test
15) $^{60}$Co-B$_{12}$ absorption test

Protein metabolism
16) Metabolism of $^{131}$I-human serum albumin
18) Circulation plasma volume by $^{131}$I-human serum albumin
19) Circulation time between two regions

Kidney
20) Renogram by $^{131}$I-human serum albumin
21) Kidney scintigram

Lung
22) Pulmonary scintigram

Brain
23) Brain scintigram

When the doctors from all the clinical departments want to make the above-mentioned tests on their patients, we must make the tests on the patients and write the report for their doctors. But, it is impossible to make all the above-mentioned tests by three doctors and five technicians only. Then, with the cooperation of doctors from the departments of internal medicine, surgery and radiology, the routine work has been made.

That is, when a doctor in the clinical department wants to make the above-mentioned tests or similar tests, he joins us as one of the co-operating members, and he has the duty to make the test and write the report. But, he has the right to make the detailed investigation except the routine work and to present his work at the medical meeting and contribute the report to the Journal as his own work. Therefore, I think, in the present condition in this division, the routine work and research work have been progressing relatively smoothly. But, for higher development of clinical uses of radioisotopes, we hope this division develops into the department of nuclear medicine in the near future, and this department has members from every field, such as endocrinology, hematology, gastroenterology, cardiovasculology and so on, and the routine work in this division is done by its own doctors. We would like to make the unit capable of contributing to the development of new clinical tests and to the studies on the clarification of pathological physiologies in various diseases by using radioisotopes with the co-operation of doctors from all the clinical departments. And also, for the development of nuclear medicine, it is necessary to find new nuclides for clinical uses, and to make new counting instruments and mathematical computer for analysis of data. Therefore, we hope to co-operate with the pharmacologists, electricians and mathematicians for the development of nuclear medicine.