A Method of Antibody-labelling by ^{75}Selenomethionine

N. Tokita, S. Hirabayashi and M. Kiga

Department of Radiology, Showa University, Tokyo

In the experiment to establish method other than that generally performed in antibody protein labelling for rdaioimmunoassy, ^{75}selenomethionine was proved to be useful because of the fact that the pooled methionine contained ^{75}selenomethionine was incorporated into newly synthesized protein molecules by antigenic stimulations.

Our experiments were made by antigenic stimulations with bovine-serum albumin simultaneously administrated ^{75}selenomethionine intravenously and then after ten or more days later the rabbit antiserum was prepared. The antiserum was determined by both qualitative and quantitative precipitation as well as by their radioactivity of ^{75}selenium. The precipitating CPM was maximum on the point of optimal proportion demonstrated by quantitative precipitation, linearly increased and decreased concerning to the point. These gradients were proved to be more convinient in radioimmunoassy than another immunochemical methods including generally performed radioimmunoassy for the following characteristics; 1) ^{75}selenomethionine is a gamma emitter with half life of 120 days, 2) the incorporated selenomethionine is more stable in labelling than the other chemical labelling methods.

Changes in Serum Immunoreactive Insulin with Oral Glucose Tolerance Test in the Patient of Diabetes Mellitus

S. Shimoda, K. Takizawa and S. Wada

Department of Internal Medicine, Ohta General Hospital, Ohta and First Department of Internal Medicine, Gunma University, Maebashi

It has been well known that the immunoreactive insulin (IRI) is increased quickly and usually reached the maximum within 30 min after oral administration of glucose in the person without diabetes mellitus. In contrast, in most of patients with diabetes mellitus, the maximum point of increased IRI observed after oral administration of glucose can not be obtained. In the present report, changes in IRI in various types of diabetes mellitus by oral administration of 50 g glucose were studied and the patients were divided into 4 groups in according to the response of IRI to glucose administration.

1. Fasting level of IRI in the serum of diabetes mellitus was less than 10 μU/ml and no response of IRI to glucose administration was observed at any times within 180 min.
2. Level of IRI at fasting time was less than 20 μU/ml. IRI was gradually increased after glucose administration upto 180 min.
3. Approximately 50–60 μU/ml of serum IRI was observed and further increased IRI was observed by glucose administration upto 180 min.
4. IRI at fasting time was more than 100 μU/ml with 200–300 mg/100 ml of blood sugar levels.