Development of the Cookie Test for the Early Detection and Analyses of Metabolic Risk Factors of the Life Style Related Diseases and Its Significance

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While with toleranG 30% of the healthy subjects showed reactive hypoglycemia (2h BS below 80mg/dl) with symptoms, with cookie tests none showed hypoglycemia nor adverse effect. In National Cardiovascular Center, the rate of reactive hypoglycemia was 4.1% and in those with 2h BS below 50mg was 0.5%. The incidence seemed to be various according to the insulin reserve of pancreatic beta-cells. In subjects with life style related disorder, additional abnormalities other than basal were revealed together with insulin resistance (AUCInsulin, AUCInsulin × AUCGlucose). In subjects with exercise habit, who exhibited lower energy expenditure at rest but higher VO2max, showed smaller increase of blood glucose and insulin above basal on cookie test, indicating increased insulin sensitivity.

A new snack test in subjects without exocrine pancreatic disorder serves natural carbohydrate (75g) and fat source (24g). The test has less adverse effects, like reactive hypoglycemia. The test revealed glucose intolerance, diabetes, hyperinsulinemia, postprandial dyslipidemia and insulin resistance more efficiently than in the routinely performed OGTT (liquid glucose) or fat loading test.

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