

▷検査法の開発と病態解明のアプローチ(4)◁

## 生活習慣病代謝諸因子の早期検出と病態解析のための クッキーテストの開発とその意義

原 納 優\*<sup>1</sup> 足 立 友 美\*<sup>2</sup> 名 引 順 子\*<sup>3</sup> 辻 直 樹\*<sup>4</sup>  
竹 谷 耕 太\*<sup>5</sup> 佐々木 文 伸\*<sup>6</sup> 山 口 福 美\*<sup>7</sup> 芝 地 昌 子\*<sup>8</sup>  
宮 脇 武 志\*<sup>9</sup> 植 田 福 裕\*<sup>10</sup> 森 那由多\*<sup>11</sup>

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

*Yutaka HARANO, MD\*<sup>1</sup>, Tomomi ADACHI\*<sup>2</sup>, Junko NABIKI\*<sup>3</sup>, Naoki STUJI\*<sup>4</sup>,  
Kouta TAKETANI\*<sup>5</sup>, Fuminobu SASAKI\*<sup>6</sup>, Fukumi YAMAGUCHI\*<sup>7</sup>, Masako SHIBATI\*<sup>8</sup>,  
Takeshi MIYAWAKI\*<sup>9</sup>, Fukuhiro UEDA\*<sup>10</sup> and Nayuta MORI\*<sup>11</sup>*

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 VO<sub>2</sub>max, 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.

[Rinsho Byori 52 : 55~60, 2004]

\*<sup>1</sup>College of Nutrition, Koshien University, Takarazuka 665-0006

【Key Words】 glucose intolerance(耐糖能異常), postprandial dyslipidemia(食後高脂血症), hyperinsulinemia(高インスリン血症), insulin resistance(インスリン抵抗性), life style related disease(生活習慣病)

\*<sup>1</sup>~<sup>11</sup> 甲子園大学栄養学部(〒665-0006 宝塚市紅葉が丘10-1)