Postnatal Growth and Biochemical Markers of Late Preterm Infants: Prospective Birth Cohort

Tomoko Yoshida, Chie Takahashi, Noboru Uchida, Kanako Nakao, Daisuke Sugawara, Yasuko Tanaka
Hiroyuki Tanaka, Yuta Chiba, Yumiko Terada, Kazuko Mizutani, Yasuhiro Naiki, Reiko Horikawa

Division of Endocrinology and Metabolism, National Center for Child Health and Development, Tokyo, Japan

INTRODUCTION
Late preterm birth (defined as infants born between 34 and 36 weeks of gestational age) is increasing worldwide. Their postnatal growth has not been fully investigated.

OBJECTIVES
• To identify the characteristics of postnatal growth and biochemical markers in late preterm infants.

SUBJECTS AND METHOD
• Among 2014 children in the birth cohort study conducted from 2010, 51 children were born late preterm with birth weight and height as AGA.
• Matched control group were set for maternal age and other background, but born in term.
• Measurement of their height and weight: 1, 3, 6, 9, 12 months and 2, 3 years.
• Measurement of blood sample (at age of 1 and 3): Serum IGF-1, Leptin, Adiponectin, total cholesterol, 25(OH)D, casual blood glucose
• Maternal history during pregnancy, including weight gain and complications: obtained from cohort database.
• Children's nutrition: surveyed by questionnaires.
• Statistical analysis: Mann-Whitney and Krusal-Wallis test.

RESULTS

CONCLUSIONS
Late preterm group might have higher risk in developing obesity later in life. We need additional follow up to judge. We are going to continue this cohort study.

#1. There was no significant difference in mother's condition during pregnancy and nutrition of the children within late preterm and term controls.
#2. Height SD score, serum biochemical data didn't show significant difference between these two groups.
#3. At the age of 2, there was no statistically significant difference in BMI, although late preterm children showed a tendency of higher BMI.
#4. At the age of 3, late preterm group had significantly higher BMI compared to controls.