

## **Type 1 diabetes in young adults**

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As IDF DIABETES ATLAS Seven Edition 2015, the incidence of type 1 diabetes (T1D) under 15 years old in Asian countries is quite low compared to that of the western countries. We have analyzed the national wide estimated incidence of T1D by using data from the government-subsidized Specified Pediatric Chronic Diseases Treatment Research Project during the fiscal years 2010 to 2012. Diagnostic criteria for T1D include, in addition to physician-diagnosed T1D, GAD antibody positivity or being on insulin therapy. Among T1D aged 15 years old or younger, the incidence of type 1 diabetes during the fiscal year 2010 was estimated as 2.3/100,000 person-years (males/females, 1.9/2.6). The incidence was shown to peak at 12 years of age at 4.2 (3.9 at 12 years of age among males; and 5.2 at 11 years of age among females). This data was similar that reported from Beijing (1995-2010, 3.1/10<sup>5</sup>) and that from Shanghai (1997-2011, 2.4/10<sup>5</sup>).

The increase in the incidence of childhood T1D has been reported in Western countries. However, so far there was no similar data observed in Japanese children.

Most epidemiological studies of T1D focus on disease forms with clinical diagnosis during childhood and adolescence. Few studies on epidemiology of T1D in adults are available worldwide, as compared to those reporting on children with T1D. Clinically, adult T1D is difficult to discriminate from certain forms of Type 2 Diabetes (T2D). Some reports showed the incidence of young adult T1D in Western countries. So far, we cannot find any reports of the incidence of young adult T1D from Asia countries. To discriminate young adult T1D from T2D in these countries, of which low incidence of T1D and high incidence of T2D, is quite difficult.

For these three years, we have conducted the researches to see the prevalence and the social situation of Type 1 diabetes among all age population in Japan, supported by the Ministry of Health, Labor and Welfare. These studies are composed of three major domains. First is to estimate the prevalence rate from the medical records of the hospital and the survey to the hospitals. Second is the questionnaire survey about social situation of adulthood type 1 diabetes patients. Third is to establish the national registry system of this disease in all age. In this lecture, the advance and difficulties of these epidemiological researches of young adult type 1 diabetes in Asia will be addressed.