

SUMMARY

Ratna Indriyani, NIM 138070900011001. Specialist Education Program of Pediatrics Medicine, General Hospital Dr. Saiful Anwar Malang, Medical Faculty of University of Brawijaya, January 2018. Correlation Between Control Glicemic Status, Vitamin D Status (25(OH)D) and Antropometric Status in Pediatric Type 1 Diabetes Melitus. Supervisor: dr. Harjoedi Adji Tjahjono, Sp.A(K).

Type 1 DM is a cronic immune-mediated destruction of pankreatic β -cells, leading to partial, or in most cases, absolute insuline deficiency. The etiology is multifactorial, the specific roles for genetic suceptibility, environmental factors, the immune system and β .T1D account for 5% to 10% of the total cases of diabetes worldwide. Type 1 diabetes accounts for over 90% of childhood and adolescent diabetes. Data based on national registri of type 1 diabetes in pediatric by Indonesian Pediatric Society to 2014 had found 1021 cases. In dr. Saiful Anwal Hospital in Malang between 2011-2016 there have 60 patients of type 1 diabetes mellitus with age 1-18 years.

Vitamin D plays an important role in the bone health. Vitamin D deficiency in T1D can cause bone turnover suppresion then disturb height velocity. Poor control metabolic (high HBA1C) can cause inadequate increase of weght and height child.

The purpose of this study to prove that there were correlation between HbA1c, 25(OH)D and antropometric status in T1D. A cross-sectional study was conducted in type 1 DM children under 18 years old who visited outpatient clinics in Dr. saiful anwar Hospital, Malang. The exclusion criteria were have aother autoimmune disease, severe infection, renal and liver function disturbance. The parameters that measure were antopometric status, level of HbA1c and 25(OH)D.

The data were statistically analyzed using computer software SPSS 17 version. The result of research presented in the form of table a frequency distribution. The different on the status of vitamin D (25(OH)D) and HbA1c were compared to nutrition status with Kruskal-Wallis test because variables measured in ordinal scale. If the chi-square count less than square table, and p-value < 0.05, there is a significant difference between variables. The research is used the correlation chi-square, to see correlation between 25(OH)D, HbA1c and nutritional status, if p-value < 0.05, it means there is a significant correlation between variables.

The study results showed 19/28 children with good nutrition that the level of HbA1c > 9% (poor metabolic control) in 18/28 children, deficiency/insuficiency 25(OH)D were found in 17/28 children. There were no significant different between level of HbA1c in . The subjects with good nutriton and poor metabolic control (HbA1c >9%) were found 13/28. There were found no significant

correlation between control glicemic status with antropometric status. There were no significant correlation between HbA1c and 25(OH)D with antropometric status and there were no significant correlation between level of HbA1c and 25(OH)D.