

# Evaluation of Children with Type 1 Diabetes Mellitus in terms of Overweight / Obesity in Tertiary Care Hospital

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## Abstract

**Abstract Objective:** Obesity was once a rare problem in Type 1 diabetes mellitus, but is a growing problem today. The aim of our study is to determine the frequency of overweight / obesity at the time of diagnosis and during follow-up in children with type 1 diabetes mellitus as well as review the conditions that may accompany. **Methods:** 315 patients with type 1 diabetes mellitus were retrospectively analyzed. The patients were divided into two groups according to the last examination as normal weight and overweight / obese. The two groups were compared in terms of age at diagnosis, gender, birth weight, family history, anthropometric measurements, insulin dose used and blood pressure measurements, and insulin, c-peptide, hemoglobin A1c, triglyceride, and high-density lipoprotein levels at the time of diagnosis and follow-up. **Results:** The prevalence of overweight / obese in all patients was 4.8% at the time of diagnosis, while it was 9.8% at the last examination. The height, weight and BMI SD scores and c-peptide levels at the time of diagnosis of the overweight / obese group were higher than those with normal weight ( $p < 0.001$  and  $p = 0.008$ , respectively). The frequency of dyslipidemia and hypertension was higher in the overweight / obese group than in the normal weight group [18.2% versus 5% ( $p = 0.015$ ) and 10% versus 1.5% ( $p = 0.003$ ), respectively]. **Conclusion:** In our study, the fact that the overweight / obese group had higher BMI and c-peptide and lower HDL values at the time of diagnosis can be evaluated as indicators that insulin resistance syndrome can accompany T1DM from the beginning (double diabetes). When determining the treatment and follow-up strategies of patients with type 1 diabetes mellitus, considering the risk of obesity and taking the necessary precautions is very important in terms of morbidity.

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**Short Running Title:** Obesity in children with type 1 diabetes

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