S-09

# Prevalence of Childhood Obesity and Associated Morbidities in North Cyprus

Hasan Sav, Umut Mousa

Department of Endocrinology and Metabolism, Burhan Nalbantoglu Hospital, Lefkosa, Cyprus

## Abstract

**Introduction:** Obesity is a public health problem involving both children and adults with an increasing prevalence in the World and North Cyprus. In this study we aimed to determine the prevalence of childhood obesity in our country and plan future studies.

**Subjects and Methods:** In May-June 2007, we collected demographic, anthropometric and nutritional data of 7832 students between 12-15 years of age studying in 29 different secondary schools. We determined that the prevalence of obesity was 13.7% (1073); overweight 18.3% (1433); low body weight 3.5% (274). We invited 274 children in the obese group to our department of Endocrinology and Metabolism for anthropometric and metabolic analyses.

**Results:** Two hundred and seventy four (53.6%) were girls and 127 (46.4%) were boys. The median age was 13.66. According to the National Cholesterol Education Program Adult Treatment Panel – III criteria (NCEP ATP III). 122 (44.5%) were diagnosed as Metabolic Syndrome (MetS). The body mass index percentiles correlated positively with the waist circumference, hip circumference and HOMA IR score (r= 0.53; p<0.001; r=0.54. p<0.001; r=0.15; p<0.05 respectively). HOMA IR correlated positively with systolic blood pressure. diastolic blood pressure. triglycerides. hip circumference. fasting blood glucose and waist circumference (r=0.19; p<0.001; r=0.17. p<0.001; r=0.28; p<0.001; r=0.23; p<0.001; r=0.25; p<0.001; r=0.30; p<0.001 respectively). According to Receiver operated characteristics (ROC) curves. a HOMA IR score of ≥2.15 predicted MetS with 90% sensitivity and 20% specificity. A HOMA IR score of ≥ 5.35 predicted MetS with 90% specificity and 29% sensitivity (AUC 0.619. %95 CI: 0.552-0.686. p<0.001). The mean TSH level of subjects with MetS was higher than those without Mets (3.84±3.09 vs. 2.94±1.91; p=0.004). The free T4 levels were similar in both groups. The prevalence of diabetes in the family was similar in subjects with and without MetS [73/122 (59.8%) vs. 105/152 (69.1%). p=0.127].

**Conclusion:** The prevalence of childhood obesity and associated comorbidities are similar in North Cyprus with other Mediterranean countries.

DOI: 10.25179/tjem.20182202-S09