Obesity and diabetes in children and adolescents with Down Syndrome: data from a large diabetes centre in the United Arab Emirates

Introduction

Down Syndrome (DS) is the most prevalent chromosomal abnormality. Obesity and type 1 diabetes mellitus (T1DM) are known to be more common in patients with DS compared to the general population. Few studies investigated the prevalence of type 2 diabetes mellitus (T2DM) in DS. This study aims to investigate the prevalence of obesity and diabetes mellitus (DM) among children and adolescents with DS seen at Imperial College London Diabetes Centre (ICLDC) in the United Arab Emirates (UAE).

Methods

42 participants were identified using the electronic patient record. Data on body mass index (BMI), diabetes status, pancreatic autoantibody status and medication were reviewed for each patient. BMI percentile was computed for each participant and matched to the corresponding BMI categories based on Centre for Disease Control (CDC) standards. Data are presented as median (range).

Results

There were 24 (57.1%) females and 18 (42.9%) males [age 12.0 (3-19) years, weight 36.3 (11.3-119) kg, height 1.3 (0.8-1.7) m, BMI 22.6 (13.6-49.0) kg/m^2)]. 52% were overweight (23.8%, BMI 85th to <95th percentile) or obese (28.6%, BMI$\geq$95th percentile). Seven (16.7%) had confirmed diagnosis of DM; Six (14.3%) of these patients had T1DM with positive GAD antibodies. One (2.4%) had (T2DM), was obese and on metformin.

Conclusion

This DS cohort demonstrates a higher prevalence of overweight and obese children and adolescents compared to the overall paediatric population in the UAE. Additionally, rates of T1DM are substantially higher in this group. Although this study is not generalizable to all children with DS in the UAE, our results support the need for aggressive weight management and regular medical examination among children with DS.

1. Conflict of Interest

None Disclosed.

2. Funding

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