

**Obesity and diabetes in adults with Down Syndrome:
data from a large diabetes centre in the United Arab Emirates (UAE)**

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Background

Down Syndrome (DS) is the most common chromosomal abnormality. Obesity and type 1 diabetes mellitus (T1DM) are known to be more prevalent in patients with DS than the general population. Available data on the prevalence of type 2 diabetes mellitus (T2DM) in DS is scant.

Objectives

This study aims to investigate the prevalence of obesity and diabetes mellitus (DM) in adults with DS seen in Imperial College London Diabetes Centre (ICLDC) in the United Arab Emirates (UAE).

Methods

Participants with a diagnosis of DS recorded on the patient database were included in this study. Information including body mass index (BMI), diabetes status, pancreatic autoantibody status and medication were reviewed for each record. Data are presented as median (range).

Results

35 participants [18 female, age 25.0 (20-43) years, weight 73.6 (49.8-128.0) kg, height 1.5 (1.3-1.6) m, BMI 34.2 (26.7-48.1) kg/m²] were identified. All patients were overweight (25.7%; BMI 25.0-29.9 kg/m²), obese (40%; BMI 30-39.9 kg/m²), or severely obese (34.3%; BMI $\geq$ 40.0 kg/m²). Nine (25.7%) had a confirmed diagnosis of DM. One (2.9%) had T1DM and was overweight with positive GAD and normal IA-2 antibodies. Eight (22.9%) had (T2DM); Six (75%) of these patients were severely obese. 75% of patients with type 2 diabetes and DS were on metformin.

Discussion

We have reported data on obesity and diabetes in people with DS attending a large Diabetes Centre. Although our data may not be representative of the DS population in the UAE in general, they suggest a high prevalence of overweight and obesity with major management challenges.