Neurodevelopmental disorders are highly over-represented in children with obesity: A cross-sectional study

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Abstract

Objective
To investigate prevalence of neurodevelopmental disorders in children with obesity and to compare body mass index (BMI) and metabolic profile in the children.

Methods
Seventy-six children (37 girls, 39 boys) were consecutively recruited from a university outpatient clinic specialized in severe obesity. Neurodevelopmental disorders including attention-deficit/hyperactivity disorder (ADHD), autism spectrum disorder (ASD), and developmental coordination disorder (DCD) were assessed using interviews and questionnaires. Neurodevelopmental diagnoses were collected retrospectively in medical records.

Results
BMI ranged between 1.9 and 5.9 SDS and age between 5.1 and 16.5 years. In 13.2% and 18.4% ASD and ADHD was assigned, respectively. In addition, 25% screened positive for DCD, 31.6% had at least one neurodevelopmental disorder, and 18.4% had a parent who screened positive for adult ADHD. Girls with ASD/ADHD had higher BMI SDS than girls without neurodevelopmental disorder (P = 0.006).

Conclusions
One third of children with obesity referred to specialist centers have a neurodevelopmental disorder including deviant motor skills, and these problems may deteriorate weight status. One fifth of the parents exhibit ADHD symptomatology which could partly explain the poor adherence by some families in obesity units. Future obesity therapy could benefit from incorporating a neurodevelopmental treatment approach.