

Previously undiagnosed attention-deficit/hyperactivity disorder associated with poor metabolic control in adolescents with type 1 diabetes.

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Abstract

BACKGROUND:

Managing modern diabetes treatment requires efficient executive functions. Patients with attention-deficit/hyperactivity disorder (ADHD) and type 1 diabetes have poor metabolic control and present with ketoacidosis more often than patients without ADHD.

OBJECTIVE:

To assess whether patients with type 1 diabetes and with indications of executive problems met criteria for ADHD, and to investigate whether these patients had difficulties achieving metabolic control.

METHODS:

In a hospital-based study, including 3 pediatric departments at hospitals in Stockholm and Uppsala, Sweden, questionnaires regarding executive problems had been filled out by 12- to 18-year-old patients with type 1 diabetes and their parents. Out of 166 patients with completed questionnaires, 49 were selected for a clinical study due to reported executive problems/ADHD symptoms. However, 7 already had a diagnosis of ADHD, 21 denied follow-up, 8 did not respond, leaving 13 adolescents for the clinical assessment.

RESULTS:

Of the clinically assessed adolescents, 9 (6 girls) met criteria for ADHD. Patients who did not respond to the follow-up and patients who were diagnosed with ADHD within the study, showed to a larger extent than the other study groups high HbA1c levels (>70 mmol/mol, 8.6%). HbA1c >70 mmol/mol (8.6%) was associated with diagnosed ADHD (prior to or within the study), odds ratio 2.96 (95% confidence interval 1.02-8.60).

CONCLUSION:

Patients with type 1 diabetes and poor metabolic control should be assessed with regard to ADHD. There is a need for paying special attention to girls with poor metabolic control.