

RESEARCH ARTICLE

## Subclinical left ventricular diastolic dysfunction in adolescents with type 1 diabetes

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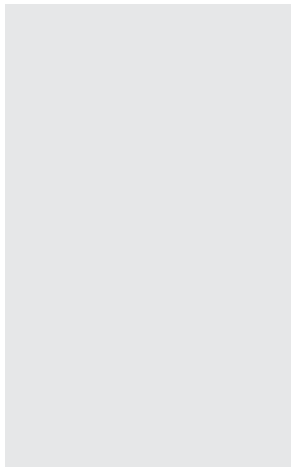
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### Abstract

**Background:** To determine the prevalence of subclinical left ventricular diastolic dysfunction (LVDD) and its association with metabolic control in adolescents with type 1 diabetes.

**Methods:** We carried out a study in 53 adolescents with type 1 diabetes in two phases: cross-sectional and after performing two-dimensional M-mode echocardiogram and color Doppler, a cross-sectional comparison. Subjects were divided into two groups: the first without LVDD and the second with LVDD. LVDD was considered when there were three or more alterations according to echocardiographic data (rate of atrial contraction, time of deceleration, time of volumetric relaxation) accompanied by systolic function >50%. We also determined glucose, hemoglobin, glycosylate, and microalbuminuria.

**Results:** Of the adolescents with diabetes, 16.98% showed echocardiographic data of LVDD; 15.10% were male. Pseudonormalized pattern was observed in 7.54% compared to 5.66% with impaired relaxation pattern and 3.77% with restrictive pattern. Furthermore, there was a longer time of disease evolution, obesity and a significant increase of glycemia, glycosylated hemoglobin and microalbuminuria.

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