

Adiponectin serum levels and their relationships to androgen concentrations and ovarian volume during puberty in girls with type 1 diabetes mellitus

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Aim: To study the adiponectin levels during puberty in girls with type 1 diabetes mellitus (DM1) and their relationship to body mass index (BMI), Tanner stage, ovarian volume (OV), and androgen levels. **Methods:** We studied adiponectin and testosterone levels and OV in 56 pubertal girls with DM1 and in 59 healthy girls serving as controls. The effects of DM1, BMI standard deviation scores (BMI SDS), testosterone, and OV over adiponectin levels were assessed. **Results:** The adiponectin levels were higher in the DM1 girls as compared with the controls. There was a significant decrease in adiponectin concentrations during puberty in DM1 girls only. The adiponectin levels in the girls with DM1, but not in the controls, exhibited a negative correlation with OV ($r = -0.427$, $p = 0.002$) and testosterone ($r = -0.262$, $p = 0.049$). Regression analysis showed DM1, BMI SDS, testosterone levels, and OV to be significant factors over adiponectin levels. The effect of Tanner stage was due to differences in