

Metformin for the treatment of hyperandrogenism in adolescents with type 1 diabetes mellitus

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© 2013 S. Karger AG, Basel. Background: A high prevalence of hyperandrogenism has been reported in women with type 1 diabetes (T1D). Metformin has been used as a therapeutic agent in patients with polycystic ovarian syndrome and in T1D patients without hyperandrogenism. This study sought to determine the effect of metformin on hyperandrogenism and ovarian function in adolescents with T1D. Methods: We recruited 24 girls with T1D. The participants had hyperandrogenism and displayed suboptimal metabolic control. The patients were enrolled in a randomized, double-blind, placebo-controlled trial. One group received metformin (850 mg bid) and the other group received a placebo. Treatment was administered for 9 months. Ovulation, steroids and gonadotropin levels were evaluated. Results: Metformin treatment was associated with decreases in testosterone, free androgen index, androstenedione, 17-OH progesterone and estradiol levels. The girls who were treated with placebo showed stable steroid, g