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TITLE

MYO-INOSITOL IN THE TREATMENT OF TEENAGERS AFFECTED BY PCOS

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ABSTRACT

Context: PCOS is a genetically determined lifelong disease. Adolescents with PCOS tend to be troubled by the irregular menses, hirsutism, acne, obesity and require a long-term committed treatment with OCPs that can have serious side effects. Alternative medication may be possible options for ameliorating of clinical signs and preventing long-term risks.

Objective: To compare the effectiveness of myo-inositol and OCPs in monotherapy and myo-inositol in combination with OCPs in the treatment of teenagers affected by PCOS.

Materials and Methods: 13-19 years aged 61 adolescent girls with PCOS were involved in the prospective, open- label study. Patients randomized into three groups: I gr - 20 patients receiving drospirenone 3 mg/ethinyl estradiol 30 µg, II gr - 20 patients receiving 4g myo-inositol plus 400 mg folic acid, III group - 21 patients receiving both medication. Evaluation of anthropometric, endocrine and metabolic parameters were conducted before and after 3 month of treatment.

Results: After receiving of myo-inositol significant reduction in weight, BMI, glucose, C-peptide, insulin, HOMA-IR, FT, LH were detected. The levels of SHBG, TT, FAI, DHEA-S, AMH did not change statistically significantly. After receiving of OCPs weight and BMI slightly increased, metabolic parameters did not change. Combination of myo-inositol and OCPs didn't change weight and BMI, but reduction in C- peptide, insulin, HOMA-IR were detected. TT, FT, FAI, DHEA-S, LH, AMH levels decreased, SHBG increased.

Conclusions: Myo-inositol is effective for correction of metabolic parameters in teenagers affected by PCOS. With combination of myo-inositol and OCPs antiandrogenic effects are enhanced, negative impact of OCPs on weight gain is balanced, metabolic profile is improved. Thus, simultaneous treatment can be considered as a highly effective approach in PCOS adolescents.

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