

Myo-inositol administration positively affects hyperinsulinemia and hormonal parameters in overweight patients with polycystic ovary syndrome

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Abstract

Objective. To evaluate the effects the administration of myo-inositol (MYO) on hormonal parameters in a group of PCOS patients.

Design. Controlled clinical study.

Setting. PCOS patients in a clinical research environment.

Patients. 20 overweight PCOS patients were enrolled after informed consent.

Interventions. All patients underwent hormonal evaluations and an oral glucose tolerance test (OGTT) before and after 12 weeks of therapy (Group A ($n = 10$): myo-inositol 2 gr. plus folic acid 200 μg every day; Group B ($n = 10$): folic acid 200 μg every day). Ultrasound examinations and Ferriman-Gallwey score were also performed.

Main outcome measures. Plasma LH, FSH, PRL, E2, 17OHP, A, T, glucose, insulin, C peptide concentrations, BMI, HOMA index and glucose-to-insulin ratio.

Results. After 12 weeks of MYO administration plasma LH, PRL, T, insulin levels and LH/FSH resulted significantly reduced. Insulin sensitivity, expressed as glucose-to-insulin ratio and HOMA index resulted significantly improved after 12 weeks of treatment. Menstrual cyclicity was restored in all amenorrheic and oligomenorrheic subjects. No changes occurred in the patients treated with folic acid.

Conclusions. Myo-inositol administration improves reproductive axis functioning in PCOS patients reducing the hyperinsulinemic state that affects LH secretion.

Keywords: *Myo-inositol, LH, hyperinsulinemia, polycystic ovary syndrome, inositolphosphoglycan*