

Naltrexone effects on insulin sensitivity and insulin secretion in hyperandrogenic women

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A total of 12 women (24.2 ± 1.6 years old, BMI 36.7 ± 1.5 Kg/m²) with hyperandrogenism (HA) and with normal glucose tolerance test were studied to evaluate the involvement of endogenous opioids in the pathophysiology of insulin secretion and insulin sensitivity in HA by administering naltrexone, an oral opioid receptor antagonist. Six patients received naltrexone orally (75 mg daily) and another six received placebo for 12 weeks (double-blind study). Before and after therapy a frequently sampled intravenous glucose tolerance test (FSIVGTT) was performed. The insulin sensitivity index (SI) was determined by Bergman's program. SHBG, DHEAS, testosterone, free androgen index (FAI) and plasma concentrations of IGF-I and IGFBP-1 were determined in 3 basal samples, before and after therapy. Treatment with naltrexone in hyperandrogenic patients resulted in a decrease in fasting insulin concentrations of 40% and C-peptide concentrations of 50% ($p < 0.05$). Insulin and C-peptide from the FSIVGTT