

## **Changes in serum cortisol and prolactin associated with acupuncture during controlled ovarian hyperstimulation in women undergoing in vitro fertilization-embryo transfer treatment.**

[Magarelli PC](#)<sup>1</sup>, [Cridennda DK](#), [Cohen M](#).

### **Author information**

- <sup>1</sup>Reproductive Medicine and Fertility Centers, Colorado Springs, Colorado 80910, USA.  
info@475-baby.com

### **Abstract**

#### **OBJECTIVE:**

To determine whether changes in serum cortisol (CORT) and PRL are affected by acupuncture (Ac) in Ac-treated IVF patients.

#### **DESIGN:**

Prospective cohort clinical study.

#### **SETTING:**

Private practice reproductive endocrinology and infertility clinic and private practice acupuncture consortium.

#### **PATIENT(S):**

Sixty-seven reproductive-age infertile women undergoing IVF.

#### **INTERVENTION(S):**

Blood samples were obtained from all consenting new infertility patients and serum CORT and serum PRL were obtained prospectively. Patients were grouped as controls (IVF with no Ac) and treated (IVF with Ac) according to acupuncture protocols derived from randomized controlled trials.

#### **MAIN OUTCOME MEASURE(S):**

Serum levels of CORT and PRL were measured and synchronized with medication stimulation days of the IVF cycle (e.g., day 2 of stimulation, day 3, etc.). Reproductive outcomes were collected according to Society for Assisted Reproductive Technology protocols, and results were compared between controls and those patients treated with Ac.

#### **RESULT(S):**

CORT levels in Ac group were significantly higher on IVF medication days 7, 8, 9, 11, 12, and 13 compared with controls. PRL levels in the Ac group were significantly higher on IVF medication days 5, 6, 7, and 8 compared with controls.

**CONCLUSION(S):**

In this study, there appears to be a beneficial regulation of CORT and PRL in the Ac group during the medication phase of the IVF treatment with a trend toward more normal fertile cycle dynamics.

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