

**Effect of in vitro fertilisation (IVF) hormonal therapy
on metabolic, endocrine and inflammatory status in
IVF-conceived pregnancy**

NCT03426228

Statistical Analysis

1. Effects of IVF Therapy

Data analysis was performed with the Statistical Package for the Social Sciences (SPSS) software version 21.0 for Windows (SPSS, Chicago, IL). Parameters normality was confirmed with the Shapiro-Wilk test. Non-parametric Wilcoxon test for two related samples was conducted to assess changes at baseline vs. post-IVF treatment (12 weeks) within groups (pregnant or non-pregnant). Non-parametric Mann-Whitney U test for two independent samples was used to compare the two groups pregnant vs. non-pregnant, at baseline and at 12 weeks. Bivariate correlation was used to determine correlations between the different anthropometric and metabolic parameters at week 12. Data from the two groups were analysed separately. Linear regression was used for assessment of association of change in glucose level at 12 weeks (dependent variable) with change in other anthropometric and biochemical parameters, separately for each group. Changes in glucose and insulin levels (and the resulting HOMA-IR) throughout IVF therapy (baseline, 2, 4 and 12 weeks) were determined with the mixed model for repeated measures test. Significance level was set at $p < 0.05$ and 95% confidence interval.

2. Anthropometrics and Biomarkers of Gestational Diabetes Mellitus (GDM)

In the pregnant group, the Mann-Whitney U test for two independent samples was used to compare data at baseline with 12 weeks, for comparison between women who later developed GDM to the non-GDM group. Changes at baseline, 4 and at 12 weeks were assessed by non-parametric Wilcoxon test (two related samples) within groups (future GDM or non-future GDM women). Predictors of GDM were assessed using binary logistic regression, adjusting for the following variables: age and history of PCOS.