

Renal and Hepatic Functions after A Week of Controlled Ovarian Hyperstimulation during In Vitro Fertilization Cycles.

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ABSTRACT

BACKGROUND: One the main aspects of in vitro fertilization (IVF) cycle is to avoid any possible systemic damage on women undergoing a controlled ovarian hyperstimulation (COH). The aim of this work is to evaluate renal and hepatic function blood tests in patients undergoing controlled ovarian hyperstimulation during IVF cycles.

MATERIALS AND METHODS: We performed a prospective cohort analysis. All patients received a long stimulation protocol with gonadotropin-releasing hormone (GnRH) analogues by daily administration, since the twenty-first day of the previous ovarian cycle followed by COH with recombinant follicle-stimulating hormone (FSH). The daily dose of exogenous gonadotropins for every single patient was modified according to her follicular growth. The oocytes were retrieved during the oocyte pick up and fertilized by standard procedures of intracytoplasmic sperm injection (ICSI). The blood samples to evaluate renal and hepatic functions were taken at the 7th day of ovarian stimulation.

RESULTS: We enrolled 426 women aged between 19 and 44 years, with a mean body mass index (BMI) of 24.68 Kg/m². The mean value of blood urea nitrogen was 14 ± 3.16 mg/ dl, creatinine: 1 ± 0.45 mg/dl, uric acid: 4 ± 1.95 mg/dl, total proteins: 7 ± 3.93 mg/dl, aspartate aminotransferase: 18 ± 6.29 mU/ml, alanine aminotransferase: 19 ± 10.41 mU/ ml, alkaline phosphatase: 81 ± 45.25 mU/ml, total bilirubin 1 ± 0.35 mg/dL. All of the results were considered as a normal range following the Medical Council of Canada.

CONCLUSION: Our data suggest that, unlike ovarian hyperstimulation syndrome (OHSS), COH patients did not show any alteration to renal and hepatic functions.