Serum CRP level in day of ovum pick up and embryo transfer as a predictor for success in patients undergoing IVF/ICSI

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بسم الله الرحمن الرحيم

" قَالُوْا سُبْحَانَكَ لا عِلْمَ لَنَا إلا مَا
عَلَّمْتَنَا إِنَّكَ أَنْتَ العَلِيمُ الحَكِيمُ "

صدق الله العظيم
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List of abbreviations

ART: Assisted Reproductive Technology.

BESST: Birth Emphasizing a Sucessful Singelton at Term.

CRP: C - Reactive Protein.

C°: Celsius temperature scale.

ET: Embryo Transfer.

ESHRE: European Society for Human Reproduction and Embryo.

FET: Frozen Embryo Transfer.

FNA: Fine Needle Aspiration.

FSH: Follicle Stimulating Hormone.

HCG: Human Chorionic Goanadotrophin.

HMG: Human Menopausal Gondotrophin.

ICSI: Intra-Cytoplasmic Sperm Injection.

IL: Interleukin.

IU: International Unit.

IVF: Invitro Fertilization.

LH: Luteinizing Hormone.

MESA: Microsurgical Epididymal Sperm Aspiration.

MG: Milligram one thousandth of gram (10^{-3}).

MM: Milimeter = one thousandth (10^{-3}) of litre.

OHSS: Ovarian Hyper Stimulation Syndrome.

PESA: Percutanous Epididymal Sperm Aspiration.

PGD: Preimplantation Genetic Diagnosis.

SAA: Serum Amyloid A protein.

SAP: Serum Amyloid P component.

SEET: Stimulation of Endometrium Embryo transfer.

SET: Single Embryo Transfer.

TESE: Testicular Sperm Extraction.

VEGF: Vascular Endothelial growth Factor.

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Fatma Nehad Sobhy

Introduction

INTRODUCTION

C-reactive protein is a senstive marker in inflamatory reaction ***(Wood et al., 2000).*** The level of this protein has known to be changed with gender and increase in age ***(Wood et al., 2000).***

Studies have demonstrated that femals at the time of parturtion had elevated levels of CRP compared to those who are not pregnant, however the concentration of this marker doesn't differ between infertile and fertile individuals ***(Wood et al., 2000).***

This protein is a senstive marker in inflamatory process following hormonal stimulation ***(De Maat Mp et al., 2007).***

CRP doesn't have diurnal alteration ***(Meier et al., 2001)*** but adminstration of exogenous estrogen increases its level. ***(Stroks et al., 2008).***

Controlled hyper-ovulation of the ovaries in in-vitro fertilization (IVF) or intracytoplasmic sperm injection (ICSI) cycles is probably associated with some degrees of tissue damage and therefore changes in CRP concentration. ***(Wundel et al., 2005).***

These changes may affect sucessful rate of IVF/ICSI, implantation and pregnancy ***(Orvieto R et al., 2004).***

C-reactive protein (CRP) is a biological marker of systemic inflammation, produced by liver, ***(Ridker et al., 2001)*** and increase after estrogen adminstration ***(Kluft et al., 2002).*** CRP can be increased after hormonal stimulation; the changes of CRP may affect sucess of of in-vitrofertilization. Controlled induction of ovulation of the ovaries, and especially puncture of the ovaries in IVF or intra cytoplasmic sperm injection (ICSI) Cycles is probably associated with some degrees of tissue damage and therefore changes in CRP concentration ***(wunder BM et al., 2005)*** these changes may affect the sucess rate of IVF/ ICSI, implantation, and pregnancy ***(orvie to R et al., 2004).***

Aim of the Work

AIM OF THE WORK

The aim of this study was to determine the level of serum C - reactive protein (CRP) in day of ovum pickup and embryo transfer as predictor for success in patients undergoing intracytoplasmic Sperm injection (ICSI).

Abstract