

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

THESIS SUMMITTED FOR
FULFILLMENT OF M.S.c DEGREE IN
OBSTETRICS & GYNECOLOGY

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2015

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

" قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا
عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ "

صدق الله العظيم
(سورة البقرة - الآية 32)

List of Contents

	<i>Page</i>
Introduction	1
Aim of the Work.....	4
Abstract	6
Review of Literature:.....	8
Chapter (1): IVF / ICSI	9
Chapter (2): C-reactive protein.....	37
 Patients and Methods	 45
Results	49
Discussion	60
Conclusion and Recommendations	64
Summary	66
References	70

List of Tables

<i>Table</i>	<i>Page</i>
Table 1: <i>Recommended limits on the number of embryo to transfer</i>	20
Table 2: <i>Type of infertility</i> (in our study)	50
Table 3: <i>Percentage of pregnancy</i> (in our study)	50
Table 4: <i>Percentage of age and duration of infertility</i> (in our study)	50
Table 5: <i>Percentage of No of oocytes pickup and No of embryo transfer</i> (in our study)	50
Table 6: <i>CRP level on day of ovum pickup and day of embryo transfer</i> (in our study)	50
Table 7: <i>Percentage of CRP change</i> (in our study)	50
Table 8: <i>Comparison regarding infertility type</i> (in our study)	51
Table 9: <i>Comparison regarding Age, Duration of Infertility</i> (in our study)	51
Table 10: <i>Comparison regarding No Of oocytes pickup, No of embryo transfer</i> (in our study)	51
Table 11: <i>Comparison regarding CRP level</i> (in our study)	52
Table 12: <i>Testing the ability of increased CRP level at day of embryo transfer to predict pregnancy</i> (in our study)	52
Table 13: <i>Comparison of CRP change regarding infertility type</i> (in our study)	54

Table 14: Comparison of CRP change regarding age & infertility duration (in our study)
.....54

Table 15: Comparison of CRP change regarding No Of oocytes pickup & No Of embryo transfer (in our study)54

List of Figures

<i>Figure</i>	<i>Page</i>
Figure 1: <i>Ultrasound picture of an ovary stimulated for in vitro fertilization</i>	
.....	16
Figure 2: <i>Schematic illustration of transvaginal ultrasound-guided oocyte retrieval</i>	
.....	17
Figure 3: <i>Embryo with two pronuclei on day 1 after IVF</i>	
.....	18
Figure 4: <i>Embryo quality</i>	19
Figure 5: <i>The process of IVF</i>	22
Figure 6: <i>Ultrasound scan showing an enlarged ovary (10 cm x 6 cm) and fluid in the pouch of Douglas and the uterovesical pouch</i>	25
Figure 7: <i>Ultrasound picture of an early triplet pregnancy</i>	
.....	26
Figure 8: <i>Intracytoplasmic sperm injection procedure</i>	
.....	32
Figure 9: <i>Schematic representation of laser-assisted ICSI procedure</i>	
.....	34
Figure 10: <i>Laser zona thinning prior to ICSI</i>	
.....	35
Figure 11: <i>Meiotic spindle in a living human egg imaged by Polscope (arrow)</i>	
.....	36
Figure 12: <i>Crystal structure of C-reactive protein complex with phosphocholine form {the calcium ions are yellow, and phosphocholine is green}</i>	
.....	40

List of Figures

<i>Figure</i>	<i>Page</i>
Figure 13: <i>Model of the interaction of CRP with Complement</i>	41
Figure 14: <i>Comparison regarding infertility type</i> (in our study)	54
Figure 15: <i>Comparison between percentage of pregnant and non pregnant group</i> (in our study)	54
Figure 16: <i>Comparison between percentage of CRP change</i> (in our study)	55
Figure 17: <i>Comparison between pregnant and non pregnant as regard to infertility type</i> (in our study)	55
Figure 18: <i>Comparison between pregnant and non pregnant as regard to age</i> (in our study)	56
Figure 19: <i>Comparison between pregnant and non pregnant as regard to infertility duration</i> (in our study)	56
Figure 20: <i>Comparison between CRP level on day of ovum pick up and day of embryo transfer</i> (in our study)	57
Figure 21: <i>Comparison between pregnant and non pregnant as regard to CRP level</i> (in our study)	57
Figure 22: <i>Comparison between CRP level on day of ovum pickup and day of embryo transfer</i> (in our study)	58

List of abbreviations

ART: Assisted Reproductive Technology.

BESST: Birth Emphasizing a Successful Singleton 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 Gonadotrophin.

HMG: Human Menopausal Gonadotrophin.

ICSI: Intra-Cytoplasmic Sperm Injection.

IL: Interleukin.

IU: International Unit.

IVF: In vitro Fertilization.

LH: Luteinizing Hormone.

MESA: Microsurgical Epididymal Sperm Aspiration.

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

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

OHSS: Ovarian Hyper Stimulation Syndrome.

PESA: Percutaneous 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.

Acknowledgement

I wish to express my deepest gratitude and profound appreciation to **Dr. Sherif Abd El-Rahman El-Sharkawy**, Professor of Obstetrics and Gynecology, Faculty of Medicine, Cairo University, for his valuable advice, care, encouragement, guidance, great support and continuous help.

I wish to convey my sincere appreciation to **Dr. Ahmed Sayed El Taweel**, professor of Chemical and Clinical pathology, Faculty of Medicine, Cairo University, for his kind supervision, support and confidence.

I gratefully acknowledge the great effort and time spent by **Dr. Amir Arabi Gabr**, Lecturer of Obstetrics and Gynecology, Faculty of Medicine, Cairo University, and his helpful discussions, sincere assistance and close observation through the whole work.

Special thanks to my parents, for their tolerant support, encouragement and sacrifices they made for me.

Fatma Nehad Sobhy



Introduction

INTRODUCTION

C-reactive protein is a sensitive marker in inflammatory 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 females at the time of parturition 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 sensitive marker in inflammatory process following hormonal stimulation (*De Maat Mp et al., 2007*).

CRP doesn't have diurnal alteration (*Meier et al., 2001*) but administration 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 successful 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 administration (*Kluft et al., 2002*). CRP can be increased after hormonal stimulation; the changes of CRP may affect success of in-vitro fertilization. Controlled induction of ovulation of the ovaries, and especially puncture of the ovaries in IVF or intracytoplasmic 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 success 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
