

# EVALUATION OF OOOCYTE QUALITY IN PATIENTS WITH ENDOMETRIOSIS UNDERGOING INTRACYTOPLASMIC SPERM INJECTION

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## Introduction

### Implication of endometriosis on oocyte quality:

Endometriosis is a multifactorial disease and its effect on oocyte quality still unclear, several factors has effect on etiology, from other hand the studies of oocyte developmental are limited by ethical constraints on use of human oocytes and embryos for biomedical research also difficult to monitor the embryos transferred to uterus and the factors affected on embryo development and implantation.

Also, there are number of studies evaluated the negative impact of endometriosis on oocyte quality by several mechanism such as clinical and biological data in related to different stages of endometriosis.

## Aim of the work

The aim of this study is to Evaluate the quality of oocytes in patients with endometriosis Undergoing ICSI.

## Methods

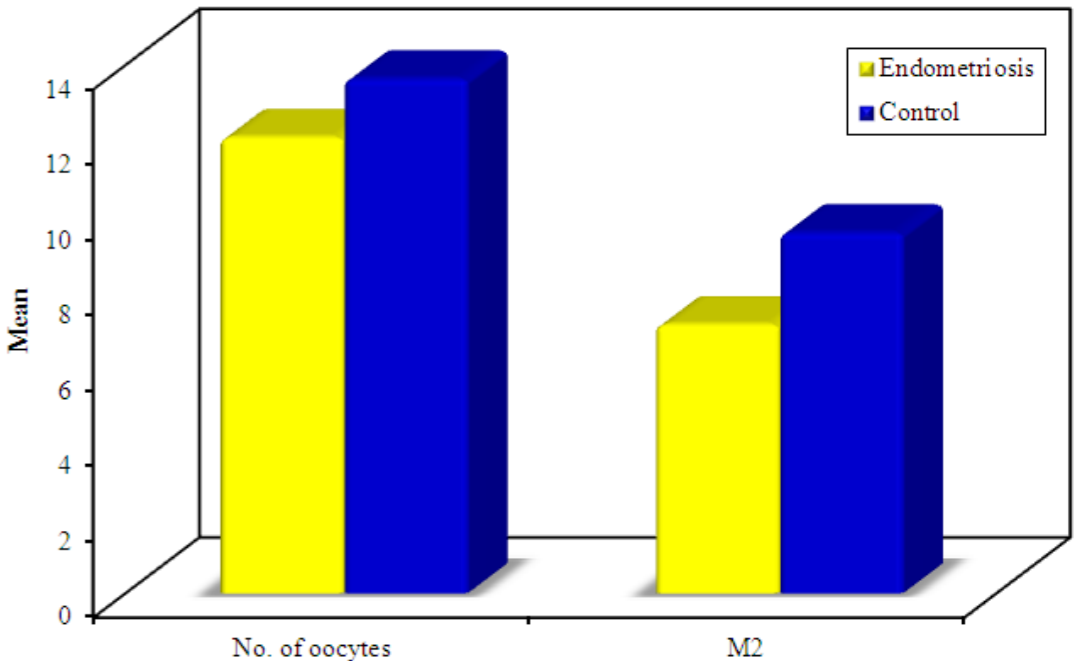
This was a retrospective cohort analysis of oocytes quality in which 100 infertile ladies with endometriosis compared with 200 infertile ladies without endometriosis were recruited from the infertility clinic of El-Shatby maternity University Hospital and a repro-Fertility Center. All the patients accepted and consented to the intra-cytoplasmic sperm injection program.

## Results

Table for ICSI laboratory parameters in ladies with endometriosis compared to ladies with other factors infertility. Where appropriate, data are expressed as mean  $\pm$  SD.

	Endometriosis (n = 100)	Control (n = 200)	U	P
<b>No . of oocytes</b> Min. – Max Mean $\pm$ SD	3.0 -25.0 12.08 $\pm$ 5.23	3.0 – 30.0 13.64 $\pm$ 6.58	8699.0	0.066
<b>M2</b> Min. – Max Mean $\pm$ SD	2.0-21.0 7.12 $\pm$ 3.94	1.0-22.0 9.56 $\pm$ 4.72	6998.50*	<0.001*
<b>Oocvt maturity index</b> Min. – Max Mean $\pm$ SD	0.17-1.0 0.59 $\pm$ 0.20	017-1.20 0.72 $\pm$ .019	6431.50*	<0.001*
<b>Day3 embryo cleavage</b> Min. – Max Mean $\pm$ SD	1.0-9.0 3.39 $\pm$ 1.90	1.0-9.0 7.10 $\pm$ 3.83	3939.50*	<0.001*
<b>Fertilization Rate (%)</b> Fertilization Rate Mean $\pm$ SD	50.08% 50.08 $\pm$ 14.85	73.66% 73.66 $\pm$ 14.78	2667.0	<0.001*

The number of metaphase II, oocyte maturity index or mean number of Day 3 cleavage embryo and fertilization rate were statistically significantly lower in endometriosis group when compared to control group, but we did not find any statistically significant difference in the mean number of oocyte retrieved.



**Figure (1):** Comparison between the two studied groups regarding the number of oocytes and oocyte quality.

## Conclusion

Endometriosis has a negative effect on oocyte quality in patients undergoing ICSI associated with; Decrease in the number of good quality oocytes, oocyte maturity ratio, embryo quality, fertilization rate, and pregnancy rate, in endometriotic group and such difference was statistically significant.