

## Higher Body Mass Index Significantly Affects Intracytoplasmic Sperm Injection Success Rate

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**Context** .Obesity is a rising health problem worldwide that is known to impair human reproduction and considered as a contributing factor for infertility.

**Objectives** the study was conducted to assess the impact of obesity on all outcomes of ICSI program among infertile women .

**Patients and methods** The study is a prospective cohort that was conducted upon 220 infertile females after taking local IRB approval. all females aged from 20 –35 years that were divided into two groups each one contains 110 females according to Body Mass Index (BMI) value (non obese group with BMI <25 kg/m<sup>2</sup> & overweight and obese group with BMI >25kg/m<sup>2</sup>). Women in both groups received same ovarian hyperstimulation protocol (GnRH-agonist pituitary down-regulation with a combination of recombinant-FSH and human-menopausal gonadotropins). The same treating reproductive endocrinologists and embryologists under similar clinical and laboratory sittings conducted steps of ICSI cycle.

All outcomes of ICSI cycles was assessed in both groups & the impact of body fat composition on these outcomes was evaluated using appropriate statistical test for each one.

### Result(s)

The results showed a significant higher number of cleaved oocytes (7.35vs 9.05) in favour of low body mass index. fertilization rate was also statistically significant in lean women (85.6 % versus 59 %) that lead to a significant higher number of good quality embryos to be transferred with p value =0.002. overall the clinical pregnancy rate was significantly higher in lean women with 68 % pregnancy rate sompared to 53 % in obese persons. there was a trend for a higher HMG dosage in obese women compared to lean ones however this was non significant, the same was applied to the duration of stimulation.

### Conclusion(s)

Obesity has a negative impact on each outcome of ICSI cycles and leads to marked reduction in the pregnancy rate in patient with infertility undergoing ICSI treatment. So it should be recommended that obese women should be advised to loose weight and treatment either diet, medically or by surgery before going to ICSI cycle in order to improve the results of the technique .

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