IVF WORLDWIDE ONLINE CONGRESS

OBESITY AND OVERWEIGHT ARE ASSOCIATED WITH LOWER PREGNANCY RATE IN IVF TREATMENT?

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INTRODUCTION

One-third of the world population is considered to be overweight or obese. In in vitro fertilization (IVF), the need for higher doses of gonadotropins for obese patients' ovarian stimulation is well established. However, it is still unclear whether the weight effect in fertility is translated into worse clinical outcomes after embryo transfer (ET).

This study aimed to analyze the impact of body mass index (BMI) on laboratorial and clinical results of IVF treatment.

RESULTS

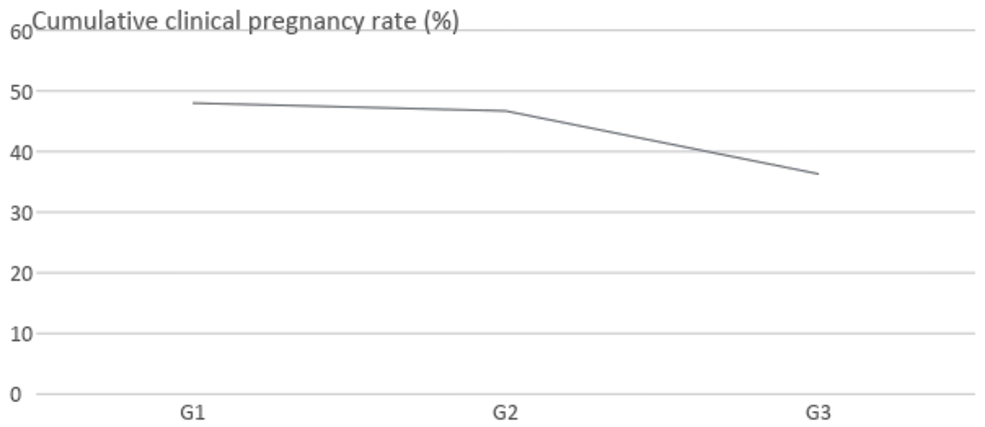
- The mean maternal age, in groups 1, 2, and 3, respectively, was: 35.5 ± 3.6 vs. 35.9±3.6 vs. 35±4.3.
- A greater number of mature oocytes was observed in groups 1 and 2: 6 [6.4-7] vs. 6 [5.6-6.6] vs. 4 [4.6-6.7], p= 0.0111

Table 1. Results comparison between groups according to BMI

	G1 n=1270	G2 n=356	G3 n=127	p
Fertilization rate (%)	76.6	74.7	76.5	0.442[1]
Implantation rate (%)	28.4	27.5	23.2	0.187
Biochemical pregnancy rate (%)	44.5	44.8	39.7	0.555[1]
Clinical pregnancy rate (%)	40.1	39.7	32.5	0.262[1]
Live birth rate (%)	33.5	32.3	29.9	0.668[1]

G1. Group 1 BMI < 24.9 kg/m^2, G2. Group 2 BMI 25-29.9 kg/m^2, G3. Group 3 BMI ≥ 30 kg/m^2.
n. Sample size regarding follicle-stimulation cycles,
Values presented as n (%).
1 – Generalized Estimating Equations analysis.

Figure 1. Cumulative pregnancy [a] rate comparison between groups.



G1. Group 1 BMI < 24.9 kg/m^2, G2. Group 2 BMI 25-29.9 kg/m^2, G3. Group 3 BMI ≥ 30 kg/m^2.
Values presented as n (%). [a] Clinical pregnancy among total cycles of each patient.
2- Qui-square test/post hoc, p=0.061
3- Linear-by-linear association. **p=0.042**

CONCLUSIONS

- Obesity negatively impacts the pregnancy chance in patients submitted to IVF treatment, probably because of the lower number of mature oocytes.
- Despite results with no statistical significance, there is a clinically relevant difference
- The higher the BMI, the worse was the cumulative clinical pregnancy rate.
- Whenever possible, considering the patient's age, the ovarian reserve, and the time required for weight loss, a reduction in BMI should be sought before IVF to obtain better results.

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