OBJECTIVE: To investigate the impact of body mass index (BMI) on the intracytoplasmic sperm injection (ICSI) outcome in women with PCOS.

Design: Retrospective case-control study.

Patients: A total of 337 cycles from 193 women with PCOS were enrolled to the study. Patients were divided into three groups according to the BMI. Group 1 consisted of 109 women with normal BMI (18.5-24.9 kg/m²), Group 2 included 84 overweight women (BMI: 25-29.9 kg/m²), and group 3 consisted of 79 obese women (BMI: 30-34.9 kg/m²).

Intervention: Controlled ovarian hyperstimulation and ICSI.

Main Outcome Measures: Response to gonadotrophins (total gonadotrophin consumption, estradiol level on the hCG day, number of retrieved oocytes), cycle cancellation rate, fertilization rate, clinical pregnancy rate, and implantation rate.

Results: Total gonadotrophin consumption was significantly higher in group 3 compared with group 1 and group 2. Estradiol level on the hCG day, and number of retrieved oocytes were significantly lower in group 3 compared with group 1 and 2. Cycle cancellation rate, fertilization rate, clinical pregnancy rate, and implantation rate were comparable among the three groups.

Conclusion: Obese women with PCOS reveal poor response to controlled ovarian hyperstimulation with higher gonadotrophin consumption and lower oocyte yield. However, obesity does not affect the pregnancy outcome in women with PCOS.