

Effect of recombinant follicular stimulating hormone and human menopausal gonadotrophins on the oocytes number in patients undergoing assisted reproductive technique

Dr. RABIA NAFEES

MCPS, FCPS, MRCOG (UK), FACOG (USA)

Assistant Professor Obst & Gynae PGMI / AMC / LGH

Background & Objective: The data regarding the effectiveness of various protocols used for controlled ovarian stimulation (COS) in assisted reproductive techniques (ART) in our own population is scant. This study compares recombinant follicular stimulating hormone (rFSH) and human menopausal gonadotrophins (HMG) in terms of follicular numbers and oocytes retrieved in Pakistani women undergoing ART.

Methods: A total of 300 patients were selected out of 1,950 patients who visited the hospital for in vitro fertilization/intra cytoplasmic sperm insemination (IVF/ICSI) from June 2018 to December 2020. These patients were further divided into two categories: first category (1) was given long protocol and the second category (2) was given short antagonist protocol. Each category was further sub-divided into two groups; group A who received HMG, and group B who received rFSH for COS.

Results: There was a significantly higher number of follicles and oocytes retrieved in category 1, with rFSH (20.01 ± 4.91 , 15.19 ± 9.18) versus. HMG (16.07 ± 5.67 , 11.10 ± 5.07) with a p-value (0.00, 0.004). On the other hand, in category 2, the number of follicles was insignificant (p-value = 0.319) in both groups. Contrary to that the number of oocytes retrieved was significantly higher with a p-value of ≤ 0.05 in both groups.

Conclusion: In COS in ART, long protocol with rFSH has much better results both in terms of follicular numbers and retrieved oocytes. While for the short protocol with the antagonist, rFSH has been demonstrated to be superior to HMG but that is limited to the number of oocytes.