SELECTIVE CUT–BACK PROTOCOL FOR IN–VITRO FERTILIZATION (IVF) OVARIAN STIMULATION IN PATIENTS WITH POLYCYSTIC OVARY SYNDROME (PCOS).

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Objective

Important goals for the PCOS patient undergoing ovarian stimulation for IVF include avoidance of hyperstimulation and the achievement of an ongoing pregnancy. We sought to examine the efficacy of a once a day, single syringe, mixed preparation of gonadotropins and the potential impact of a selective cut–back regimen.

Design

Twenty–two patients were prospectively enrolled.

Materials & Methods

PCOS patients 37 years of age or less in whom there was no prior history of endometriosis or infectious tubal disease were enrolled. All subjects took 1500 mg of extended release metformin daily, 81 mg of aspirin daily, and underwent acupuncture with transfer.

Cycles were initiated with birth control pill, luteal GnRH agonist, and a starting dose of 75–150 IU HP–FSH mixed in the same syringe with 150 IU HP–hMG (which contains 10 IU hCG activity per 75 IU). Depending on physician judgment, either a static dose of gonadotropin was given or it was cut–back. For cut–back, the HP–FSH was first removed. The HP–hMG either remained at the same dose or was also cut–back but never discontinued.

In contrast to a protocol utilizing GnRH agonist LH suppression where FSH alone is being cut–back, this approach provided a decreasing dose of FSH while maintaining LH drive to the more mature follicular cohort expressing LH receptors.

One patient received three day 3 embryos. All other patients received two embryos, 75% of them on day 5. Five patients with hyperstimulation had their oocytes retrieved but did not receive fresh transfer. Two of these patients had the evening GnRH agonist dose replaced with 250 ug of GnRH antagonist during the final 1–2 days of stimulation in an effort to foster more favorable conditions in which to proceed with oocyte retrieval.

Results

Technique	Hyperstimulation	Pregnancy Rate (PR)/Cycle	PR/Embryo Transfer(ET)	Miscarriage Rate	Ongoing PR/ET	Patients with Cryo	Avg # Cryo
Cut–Back (n=8)	0/8 (0%)	8/8 (100%)*	8/8 (100%)	0/8 (0%)	8/8 (100%)	7/8 (88%)	6
Static Dose (n=14)	5/14 (36%)	8/14 (57%)*	8/9 (89%)	2/8 (25%)	6/9 (67%)	11/14 (79%)	8

*Statistically significant ($\chi 2$). All other comparisons NS.

Conclusions

A once a day, single syringe, mixed protocol is efficacious for PCOS patients undergoing IVF. As the primary follicular cohort matures, selectively cutting back FSH dose while maintaining adequate hCG activity can achieve low hyperstimulation rates and excellent ongoing pregnancy rates.