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Egrezev ASRM Abstract (2671 characters)

OBJECTIVE:

8-10% reproductively aged women have Infertility. Among them, 25% of ART cycles are in diminished ovarian reserve (DOR) women.

DOR means fewer antral follicle count (AFC) in the woman's ovaries per menstrual cycle leading to multiple ART cycles. Recruiting higher AFC and attaining more mature oocytes(MII) per ART cycle is the goal, but few modalities exist to increase AFC and MII.

Fertility focused supplement clinically tested in DOR patient group undergoing ART are required.

Quercetin(QC) is anti-oxidative agent by inhibiting xanthine oxidase reducing oxidative species (OS) and inhibiting lipid peroxidation.
Resveratrol(RS) is an antiaging, antioxidant and is a natural activator of sirtuin, the NAD+-dependent deacetylase. Sirtuin is ovary protective.
Melatonin (MT) eliminates free radicals and ROS.It regulates circadian rhythms and delays ovarian senescence while promoting follicle formation.
Quecertin and Resveratol have a synergistic dual action in OS of female reproductive system.In combination with MT, the effect should be potentially magnified. Tested adjuvant contains quercetin, resveratrol, and melatonin at therapeutic doses.

Aim is to evaluate effect of supplement on ART Outcomes to assess true increase in ova and embryoes obtained.

MATERIALS AND METHODS:

We designed a Prospective Observational Single-arm Cohort study,

Patients of Age ≥35 yrs, (AMH <1.0 ng/ ml ; mean = 0.74, stdev = 0.36) with previous 1 failed IVF attempt were included. Exclusion criteria was endometriosis, severe OATs in male partner, severe uterine anomalies and endometrial atypia.

120 patients with DOR attending a fertility clinic, administered EGREZEVTM supplement containing Quercetin 250 mg , trans reservatol 50 mg ,Melatonin 6 mg for period of 6 weeks.
Their FSH and AFC levels were noted pre and post supplementation.

All recruited patients with FSH ≤15 and E2 ≤50 underwent a flexible antagonist IVF Cycle. (n=120)

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The women received either recombinant FSH or fixed dose combination of recombinant (FSH + LH). Trigger was given when 2 or more follicles were 18 mm or more. Trigger used is either recombinant HCG [rhCG] 500 µg or GnRH Agonist (Triptorelin acetate[TA] 0.3 mg) or Dual trigger (TA 0.1 mg and rhCG 250 µg).

Follicular output rate (FORT) and the follicle-oocyte index (FOI), fertilization rates (FR), cleavage rate (CR) and usable blastocyst formation rates (BR) post supplementation were measured.

RESULTS: Post supplementation, FSH levels significantly decreased (10.38 (SD=2.50) to 7.52 (SD=1.97)) ($p<0.0001$) and AFC (5.6 (SD=3.11) to 7.7 (SD=3.26)) ($p<0.0001$) significantly increased.

FORT was 91% (SD=14%) and FOI was 93% (SD 14%). CR was 19.90% and BR 32.29% which is significantly higher than historically seen in DOR patients.

CONCLUSION:

EGREZEVTM supplementation reduces rising FSH levels and allow release of higher AFC per ART cycle in patients with diminished ovarian reserve. This increase in AFC is reflected in ART cycle with FORT and FOI ratio above 90%. **IMPACT STATEMENT:** Targeted DOR therapy improves antral follicles by mean 2.1 oocytes with FORT and FOI >90% and Blastocyst formation of 32.29% showcasing improved ART Outcomes in this difficult patient group.