

Influential factors of ovarian reserve parameters in different etiology of infertility

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PURPOSE: To test the ovarian reserve in women visiting infertility clinic and to identify the differences among various etiology of infertility.

MATERIALS AND METHODS: Patients with their first visit to our Infertility Clinic with manifestation of inability to conceive for more than 12 months was included in the study. Female partner's ovarian reserve was recorded by early follicular FSH, LH, and E2, vaginal ultrasound was also performed to investigate the antral follicle count (AFC) in each ovary. AFC/FSH ratio was also calculated as a parameter.

RESULTS: A total of 2560 couples visited the clinic and 1337 couples (52.2%) completed standard evaluations. Surgical interventions were performed in 684 female partners (51.2%) and the causes of infertility were calculated as: 40.5% of 684 females had ovulatory dysfunction (group 1), 23.5% with tubal/peritoneal abnormalities (group 2), and 57.6% of these females had endometriosis (group 3). One hundred and ninety-two females whose standard survey revealed normal results were categorized into group 4.

We observed there were no significant differences of serum FSH in all groups except those women who were found in the status with impending premature ovarian failure. Patients with oligoanovulatory subdivision in group 1 had the highest serum LH level than those in group 4 (10.2 ± 7.9 IU/L vs. 6.2 ± 5.7 IU/L). The group 1 patients also had the highest antral follicle count (AFC) among all groups (15.2 ± 6.9), while we detected low AFC in the subdivisions of impending premature ovarian failure (9.1 ± 5.4), severe pelvic adhesion (11.2 ± 7.0), endometriosis of stages III and IV (12.0 ± 5.1), and those who had ovarian cystectomies (11.8 ± 5.6) or oophorectomy (6.0 ± 2.7).

CONCLUSION: We consider that antral follicle count is a more sensitive parameter to detect the ovarian reserve in patients undergoing infertility survey. Besides, previous ovarian cystectomy significantly reduces the ovarian reserves and may be considered as a meaningful parameter as infertility.