IS OVARIAN RESERVE AND REPRODUCTIVE OUTCOME COMPROMISED IN BREAST CANCER PATIENTS? EXPERIENCE IN 1000 WOMEN UNDERGOING FERTILITY PRESERVATION (FP).

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OBJECTIVE: To evaluate the results of controlled ovarian stimulation (COS) in women diagnosed with breast cancer versus women diagnosed with other types of cancer, and the reproductive outcomes in those who have returned to use their oocytes. DESIGN: Retrospective analysis.

MATERIALS AND METHODS: 1003 cancer patients (N=1070 cycles) undergoing FP treatment were included. Among them, 642 patients (N=688 cycles) were affected by breast cancer (group1) and 361 (N=382 cycles) suffered from other types of cancer (group2). Reproductive outcomes were evaluated in 47 and 24 women who returned to use their oocytes in groups 1 and 2 respectively. Outcomes were compared by T test or chi-square as appropriate. Significance was set as P< 0.05.

RESULTS: Age at vitrification was 34.1 ± 4.1 and 28.8 ± 6.2 y in group 1 vs group 2 (P<0.05). Letrozole protocol was used for COS in 94.5% of breast CA patients and in 9.6% of patients in group2 (P<0.05). Antagonist protocol was used in 5.5% and 85.7% of groups 1 and 2 respectively (P<0.05). Clomiphene and Agonist protocols were used in 3.1% and 1.6% of the remaining patients in group 2. Length of COS was comparable (10.6 ± 2.9 vs 10.6 ± 2.5 days; NS). Mean dose of FSH was (1835.5 ± 614.1 vs 1560.8 ± 633.8 IU) (P<0.05). Mean dose of hCG and LH were comparable. Mean E2 level (pg/ml) was significantly lower (P<0.05) in group 1 (390.2 _ 194.5) vs group 2 (1299.7 _ 425.7). Mean retrieved (11.1 _ 8.2 vs 12.7 _ 9.4) and vitrified (8.5 _ 6.6 vs 9.7 _ 7.5) oocytes were significantly lower in group 1 vs group 2 (P<0.05). When returning, mean age was 39.5 _ 3.6 and 36.9 _ 4.6 y respectively (P<0.05). Oocytes survival rate was comparable (82.3% vs. 83.2%; NS). Mean inseminated (5.5 _ 3.3 vs 7.7 _ 3.4) and fertilized (4.2 _2.5 vs 5.5_3.2) oocytes were lower in group 1 vs 2 (P<0.05). Implantation (31.8% vs 41.6%), clinical (42.5% vs 56.3%) and ongoing pregnancy (32.5% vs 43.8%) rates were lower in group 1, although no statistical differences were observed (NS). A total of 17 and 8 babies are born to date.

CONCLUSIONS: Low ovarian reserve and the compromise of reproductive outcome may be suggested for breast cancer patients, although the limited sample size makes the results
inconclusive. Analysis of the data, as the number of returning patients continues to grow, is necessary for further confirmation of these observations.