

Endometriosis is a condition of ectopic endometrial tissue in pelvic organs or elsewhere in the body [1] with an estimated prevalence of 10-15% in child-bearing age women [2]. Classical symptoms of endometriosis are dysmenorrhea, chronic pelvic pain, dyspareunia, infertility, an adnexal mass or completely asymptomatic disease [3,4]. It is estimated that about 25-50% of infertile women possibly have endometriosis and about same proportion of patients with endometriosis probably suffer from infertility [2]. There is wide belief that endometriosis impacts female fecundity possibly through many unclear mechanisms that may include distorted pelvic structure [5], impaired ovary function [5-6], and decreased oocyte/embryo quality [7-8]. The objective of this study was to examine IVF treatment outcomes in endometriotic and non-endometriotic women after COH. There may be variation in IVF outcomes in women with and without endometriosis presenting for ART.

There was no significant difference in the mean (\pm sd) ages (years) of Group A [33.8 (4.3)] and Group B [34.6 (5.4)] patients but variation was observed in the BMI (Kg/m^2) of Group A [25.5 (4.6)] and the Group B [27.9 (4.5)] (t-test= -2.31, P-value=0.03). A total of 13 (14.3%) Group A subjects did not produce any egg after COH. Group A had 1.44 probability of producing 1-10 egg yield ($\chi^2=1.60$, P-value=0.21, OR=1.44, 95% CI: 0.82, 2.54) as Group B but had only 0.50 probability of producing 11-20 egg yield ($\chi^2=4.01$, P-value=0.04, OR=0.50, 95% CI: 0.26, 0.99), 0.16 probability of producing 21-30 egg yield ($\chi^2=6.09$, P-value=0.01, OR=0.16, 95% CI: 0.03, 0.70), and 0.40 probability of producing 31-40 egg yield ($\chi^2=0.10$, P-value=0.61, OR=0.40, 95% CI: 0.04, 3.90) compared to Group B patients. Among women with egg yield of 11-20, mean blastulation rate was significantly higher (t-test=-2.81, P-value=0.009) in Group B (50.2 \pm 14.5) than among Group A (36.1 \pm 4.8). Among women with egg yield of 21-30, mean oocyte recovery rate was higher (t-test = -2.83, P-value = 0.008) and mean fertilization rate was higher (t-test = -4.86, P-value = 0.0005) among Group B (43.0 \pm 22.5; 38.6 \pm 18.4 respectively) than among Group A (24.3 \pm 1.7; 10.7 \pm 4.2 respectively). Among women with egg yield of 1-10, mean cleavage rate was significantly higher (t= -1.67, P-value=0.049) among Group B (95.1 \pm 23.1) than among Group A (84.7 \pm 34.7).

About 14% of women with endometriosis did not produce eggs while all women without endometriosis produced certain number of eggs. Women with endometriosis were more likely to produce fewer eggs than women without endometriosis. There was significant variation in the oocyte recovery, fertilization, cleavage and blastulation rates in the two groups of women with women without endometriosis doing better. Endometriosis impacts IVF treatment outcomes among women with endometriosis.

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