

DOES GNRH DOWN REGULATION AMONGST WOMEN WITH ABNORMAL BCL6 AND/OR BETA 3 INTEGRIN EXPRESSION IMPROVE IMPLANTATION RATES? AN INTERIM ANALYSIS.

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OBJECTIVE: Does GnRH agonist treatment in patients with abnormal expression of BCL6 and/or beta 3 integrin restore implantation rates to a comparative level with those patients without known endometrial receptivity abnormalities?

DESIGN: A single-institutional, retrospective convenience cohort analysis of 44 patients with recurrent implantation failure was performed comparing patients with abnormal expression of BCL6 and/or beta 3 integrin treated to GnRH agonist therapy versus 39 patients with tubal factor infertility in 2019.

MATERIALS AND METHODS: Patients were identified using CPT diagnostic/billing codes. A manual review of electronic medical records was used to screen for patients that met the inclusion criteria. PC SAS version 9.4 was used for analyses. The statistical level of significance was set to 0.05. The nonparametric Mann-Whitney test was used to compare GnRH agonist versus tubal factor for continuous variables. Fisher’s exact tests were used to make comparisons on categorical variables.

RESULTS: After accounting for age, BMI, gravity, parity (p-values of 0.72, 0.59, 0.94, and 0.74 respectively) the only significant descriptive characteristic identified was prior ART (0.003) skewed towards prior treatment in those patients with recurrent implantation failure. Of the 44 patients identified to have recurrent implantation failure, 25 underwent GnRH agonist therapy and subsequent embryo transfer. Of these patients, 21 had successful implantation defined as a positive beta-HCG. Thirty-nine patients were identified to have tubal factor infertility. Within this cohort, 15 underwent embryo transfer resulting in 12 successful implantations.

TABLE 1.

Outcome	Recurrent implantation failure N=25	Total factor N=15	P-value
Positive beta-hCG	21 (84%)	12 (80%)	0.9569
Live Birth	5 (20%)	7 (47%)	
Current pregnant (>10wk GA)	8 (32%)	2 (13%)	
SAB	1 (4%)	1 (4%)	
Biochemical pregnancy	4 (16%)	2 (13%)	
Negative beta-hCG	4 (16%)	3 (20%)	

CONCLUSIONS: Endometriosis affects 20-40% of women with infertility and is known to decrease fecundity by approximately 50%. There is a high correlation between elevations of BCL6 and inadequate secretion of beta 3 integrin and a concurrent diagnosis of endometriosis. Further, research has shown that patients with abnormal BCL6 and beta 3 integrin expression have approximately an 18% pregnancy rate in their next transfer attempt versus 70% pregnancy rate in those patients with normal expression. Our preliminary data suggests that GnRH agonist treatment in patients with abnormal expression of BCL6 and/or beta 3 integrin restores implantation rates to a comparative level with those patients without known endometrial receptivity abnormalities.

References:

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