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Poster Presentations

P-47

Effect of intrauterine injection of platelet-rich plasma and the number of injections in increasing endometrial thickness and pregnancy rate in patients with thin endometrium: A clinical trial, before and after

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Background: Adequate endometrial growth is a principal factor for implantation and pregnancy. Thin endometrium is associated with lower pregnancy rate in assisted reproductive technology.

Objective: In this study we assessed the effectiveness of intrauterine injection of platelet-rich plasma (PRP) and number of injections in increasing endometrial thickness (ET) and pregnancy rate in patients with thin endometrium.

Materials and Methods: In this clinical trial, 26

women that referred to infertility center of Imam Khomeini Hospital, Sari, Iran, from September 2019 to January 2020 participated. They had history of frozen-thawed embryo transfer cycle failure due to thin endometrium. ET was determined on the tenth day of cycle, and if ET was (< 7 mm), intrauterine injection of PRP was done on day 11-12 and it was repeated on day 13-14 until ET reached an optimal pattern, then embryo transfer was performed ($p < 0.05$ were considered as statistically significant).

Results: Mean age of women was 34.96 ± 3.86 yr. Mean of ET pre-PRP was 5.64 ± 0.79 mm which significantly ($n = 26$), increased to 7.20 ± 1.27 mm post-first PRP ($n = 26$) and increased to 7.65 ± 1.29 mm post-second PRP ($n = 13$) ($p < 0.001$). Chemical and clinical pregnancy rate was 23.1% and 19.2% respectively. One patient had ectopic pregnancy and five patient had normal ongoing intrauterine pregnancy. Of these 5 people, one had twin pregnancy that miscarriage at 19 wk of gestational age, and the other 4 had live birth at term.

Conclusion: Our findings showed that the PRP injection can be used as a method to increase ET and improvement the results of in vitro fertilization. To achieve the optimal results, PRP as a safe and low risk method can be performed twice, between 24 till 72 hr in in vitro fertilization cycles.

Key words: Platelet rich plasma, Endometrium, Fertilization in vitro, Pregnancy rate.