

FERTILITY OUTCOMES IN FRESH VERSUS FROZEN EMBRYO TRANSFER CYCLES IN PATIENTS WITH ENDOMETRIOSIS

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INTRODUCTION

Endometriosis is an enigmatic disease, having many phenotypes and pathophysiologies, as well as many deleterious effects on fertility, one of which of utmost importance is its substantial effect on the endometrium, by affecting the endometrial receptivity through various pathways. Frozen embryo transfer protocols have many advantages of attaining better fertility outcomes over fresh embryo transfer, in particular in cases of endometriosis, as it guards the endometrium against the undesired consequences of the controlled ovarian stimulation (COS) and the asynchrony between the embryo transferred and endometrium.

AIM OF THE WORK

To compare the different fertility outcomes between fresh versus frozen embryo transfer cycles in women with endometriosis.

SUBJECTS AND METHODS

A retrospective, multi-center, cohort study was performed from January 2018 to December 2021. The study included 211 patients with endometriosis related infertility, where endometriosis was the sole factor of infertility excluding any other factors. Patients were divided into two groups, group 1 included 103 patients who underwent fresh embryo transfer and group 2 included 108 patients who underwent frozen embryo transfer. The two groups were matched according to the baseline characteristics that included: age, duration and type of infertility, body mass index, previous history of endometriosis surgery and the level of anti mullerian hormone, and compared regarding the ongoing pregnancy rate, that was the primary outcome, and regarding the clinical pregnancy rate, implantation rate and miscarriage rate, the secondary outcomes.

RESULTS

In our study, the comparison between our two studied groups regarding the clinical pregnancy rate showed significantly higher results in the frozen embryo transfer group than the fresh group (82 patients (75.9%) vs 46 patients (44.7%) ($p < 0.001$)), also the frozen embryo transfer group showed a significantly higher implantation rate in comparison to the fresh group. (30.8% vs 54.1% ($p < 0.001$)). Regarding the miscarriage rate, it was higher in the fresh embryo transfer group than in the frozen embryo transfer group, however, the difference did not reach statistical significance (9 (20.9%) vs 7 (9.2%) ($p = 0.072$)). For the ongoing pregnancy rate, the frozen embryo transfer group showed significantly higher rates ($p < 0.001$).

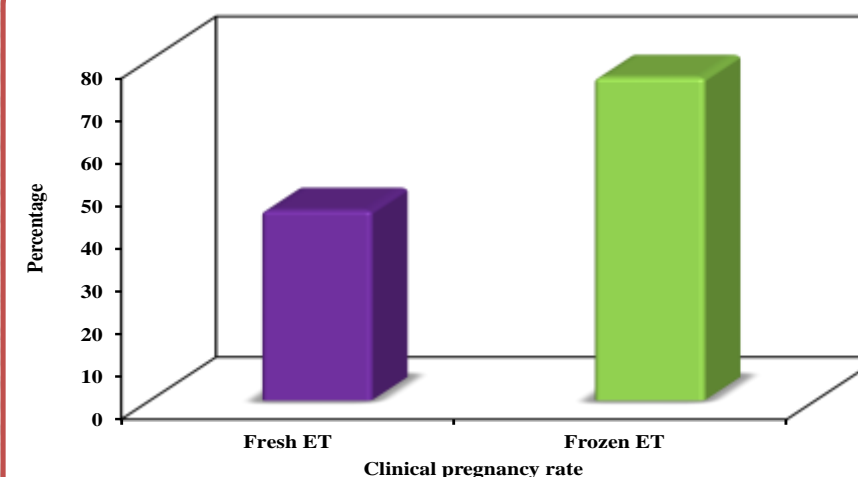


Figure 1: Comparison between the two studied groups according to the clinical pregnancy rate.

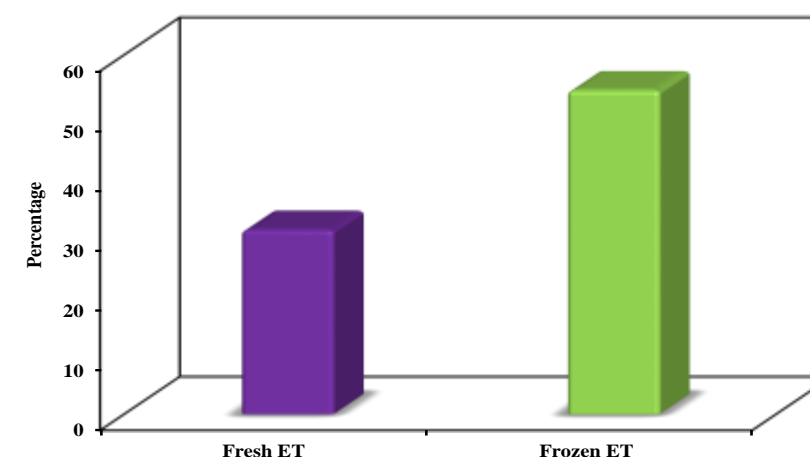


Figure 2: Comparison between the two studied groups according to the implantation rate.

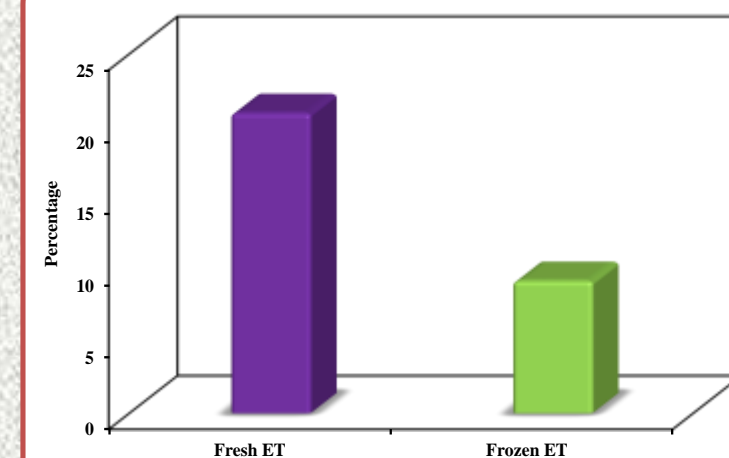


Figure 3: Comparison between the two studied groups according to the miscarriage rate.

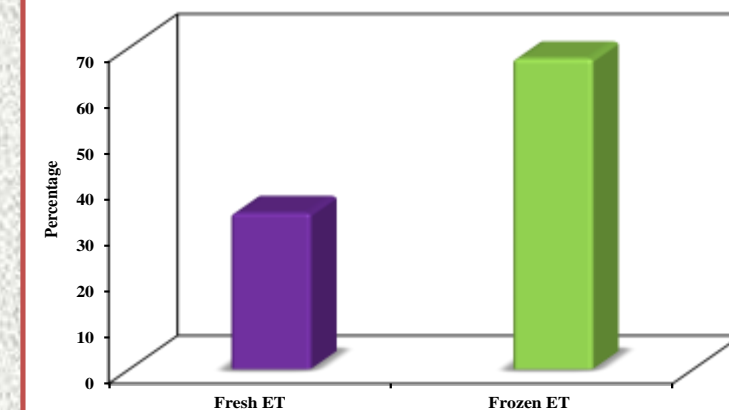


Figure 4: Comparison between the two studied groups according to the ongoing pregnancy.

CONCLUSION

We concluded that frozen embryo transfer may have an additive advantage in women with endometriosis as it protects the endometrium from the harmful effect of supraphysiological hormonal levels associated with controlled ovarian stimulation and optimizes the embryo – endometrium synchronization.