

P11 Comparison between gonadotropin-releasing hormone agonist ultralong and long protocols for IVF-ET in patients with severe endometriosis

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Objectives: There has been no consensus on the most appropriate method of controlled ovarian hyperstimulation (COH) for *in vitro* fertilization-embryo transfer (IVF-ET) in infertile women with endometriosis. Recent reports demonstrated beneficial effects of ultralong gonadotropin-releasing hormone agonist (GnRH-a) therapy before start of gonadotropin. This study was performed to investigate whether IVF-ET immediately after ultralong GnRH-a therapy affects outcomes of IVF-ET in women with severe endometriosis.

Materials & Methods: Seventy-eight infertile patients in whom endometriosis have been diagnosed by laparoscopy were included in this study. All patients had stages III or IV endometriosis according to revised American Society for Reproductive Medicine classification and no previous history of IVF-ET treatment. They were divided into two groups. Group A consisted of 34 patients who received a long acting GnRH-a, 3,75mg i.m. every four weeks for two to four injections, followed by COH (GnRH-a ultralong protocol). Group B consisted of 44 patients who underwent standard COH with mid-luteal phase GnRH-a down-regulation regimens (GnRH-a long protocol). The main outcome measures were the responses to COH and pregnancy rates in the first IVF-ET cycle. The statistical analyses were carried out using SPSS software package and Fisher's exact or Mann-Whitney U tests were used where appropriate.

Results: The two study groups did not differ with regard to fertilization rate, number of oocytes retrieved, number of embryos transferred, and endometrial thickness on hCG day as well as cancellation rates. Serum E₂ levels on hCG day tended to be lower in group A (1,195.7 ± 776.4 pg/mL vs. 1,892.5 ± 1,635.5 pg/mL, $p=0.083$) and the total dose of gonadotropins used and duration of COH were significantly higher in group A compared to group B (47.1 ± 15.3 amp. vs. 37.2 ± 14.6 amp., $p=0.003$; 12.0 ± 2.6 days vs. 10.9 ± 2.3 days, $p=0.018$). Number of good-quality embryos transferred were significantly higher in group B compared to group A (1.4 ± 1.4 vs. 2.2 ± 1.6, $p=0.021$). There were no significant differences in the pregnancy rates, implantation rates and early pregnancy loss rates between the two groups.

Conclusions: Use of GnRH-a ultralong protocol for COH in patients with severe endometriosis does not seem to improve the outcomes of IVF-ET when compared to GnRH-a long protocol. However, further randomized studies with a larger scale are required to confirm these results.

Key words: severe endometriosis, GnRH-a ultralong protocol, GnRH-a long protocol, IVF-ET

P12 Efficacy of Mechanical Assisted Hatching on Pregnancy Rates of Frozen-Thawed Embryo Transfer at Cleavage Stage

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Objectives: Assisted hatching (AH) in fresh embryo transfer cycles is known to increase the implantation and pregnancy rates, especially in women with a poor prognosis, repeated implantation failures and in older women. Little information exists in the literature regarding the role of AH in frozen-thawed embryo transfer (FET) cycles. The aim of this study was to compare the pregnancy outcomes between cleavage stage FET cycles with or without mechanical assisted hatching.

Materials and Methods: One hundred and fourteen women between the ages of 30 and 39 years undergoing FET at the cleavage stage were included in this study. Demographic characteristics, endometrial thickness, number of embryos transferred, storage time of frozen embryos, number of good quality embryos, pregnancy rates, implantation rates, and on-going pregnancy rates of FET cycles were compared between AH group (n=36) and control group (n=78).

Results: The two groups were comparable in terms of the demographic characteristics, endometrial thickness, the number of embryos transferred, the storage time of frozen embryos, and the number of good quality embryos. Pregnancy rates, implantation rates, and on-going pregnancy rates did not differ between the two groups.

Table 1. Comparison of outcomes of frozen-thawed embryo transfer cycles between the two groups

	Assisted hatching (n=36)	Control (n=78)	p-value
Pregnancy rate	19.4% (7/36)	24.3% (19/78)	0.37
Implantation rate	6.5% (8/123)	8.3% (21/253)	0.34
On-going pregnancy rate	11.1% (4/36)	14.1% (11/78)	0.45

Conclusions: Mechanical AH does not seem to improve the pregnancy and implantation rates of cleavage stage FET cycles. Further studies are needed to assess whether chemical or laser-assisted hatching may improve the pregnancy outcomes of FET cycles either at cleavage stage or at blastocyst stage.

Key words: frozen-thawed embryo transfer, assisted hatching, pregnancy rates