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## DELAY OF LUTEAL SUPPORT START IMPROVES THE CLINICAL PREGNANCY RATE IN FRESH SINGLE-BLASTOCYST TRANSFER CYCLE

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**OBJECTIVE:** The pregnancy rate is low in fresh embryo transfer cycle in IVF compared with that in frozen-thawed embryo transfer under hormone replacement cycle. It is said that pregnancy rate in fresh embryo transfer cycle is getting lower for two reasons. First, there is an inadequate endometrial environment arisen by ovarian hyper stimulation. Second, in the cases of fresh embryo transfer, the starting day of luteal phase support therapy has not yet been optimized. In this study, we investigated the effects of timing of starting of luteal support after fresh blastocyst transfer on the subsequent outcome.

**DESIGN:** Retrospective clinical study

**MATERIALS AND METHODS:** We retrospectively analyzed pregnancy rates from January 2005 to April 2010 of 254 fresh single blastocyst transfers after providing an informed consent. We administered hCG (5000 IU) and progesterone (50 mg) as a luteal phase support. Luteal phase support was started from the day of oocyte pick-up in early start group (n=137), and from one or two days later in late start group (n=117).

The clinical pregnancy rate was compared between two groups. Clinical pregnancy was defined as the detection of gestational sac confirmed by ultrasound. Statistical analysis of the data was performed using Fisher's chi-square test.

**RESULT:** The mean age of the patients ( $34.9\pm 3.6$  vs.  $34.1\pm 3.3$ ) was comparable. Clinical pregnancy rate was significantly higher in late start group than that of early start group (38.0% vs. 49.6%;  $p<0.05$ ).

**CONCLUSIONS:** The clinical pregnancy rate was improved by delaying the start of luteal phase support one or two days after the oocytes retrieval.

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