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Oocyte Retrieval Day and Laboratory Outcome in ART

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ABSTRACT

Introduction: This is a retrospective study to evaluate whether the duration of gonadotropin stimulation will affect the laboratory outcome in an ART cycle. **Methods:** ICSI cycles (n=2033) for patients 38 years and below (mean age: 31.5; Age range: 17-38) using fresh oocytes at Alpha Fertility Centre between July 2016 and April 2019 were analysed. The frequency of a cycle without a utilisable blastocyst (either for freezing, biopsy or transfer), blastulation and blastocyst utilization rate were grouped according to their day of oocyte retrieval (OR): day <9; day 9-11; day 12-14; day 15-17; day 18-20), where Day-1 is the start of gonadotropin administration. **Results:** The incidence of a cycle without a utilisable blastocyst was significantly higher in oocytes retrieved from OR day 15-17 (16.9%, $p<0.05$) compared to OR day 12-14 (7.5%). However, the blastulation and blastocyst utilization rate were not statistically significant between all groups. The blastulation rate per 2PN for: OR day <9 = 85.7%; OR day 9-11 = 77.4%; OR day 12-14 = 76.8%; OR day 15-17 = 75.0%; OR day 18-20 = 86.0%. Meanwhile, the blastocyst utilization rate per 2PN for: OR day <9 = 60.0%; OR day 9-11 = 45.2%; OR day 12-14 = 46.1%; OR day 15-17 = 45.4%; OR day 18-20 = 54.0%. **Conclusions:** This study suggests that patients with ovarian stimulation more than 15 days tend to have a higher chance of a cycle without a utilisable blastocyst compared to those who has 12-14 days of stimulation. Nonetheless, the blastulation and blastocyst utilisation rate are similar regardless of the oocyte retrieval day.

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Clinical outcome of Patients with Recurrent Implantation Failure after ERA

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ABSTRACT

Introduction: This study describes our initial experience with the endometrial receptivity analysis (ERA) on a group of IVF patients with a history of recurrent implantation failure and their clinical outcome after personalized frozen embryo transfer. **Methods:** Sixteen (16) patients with at least two previous failed FETs (of which at least one euploid transfer) who had ERA was included in this study. All patients had FET performed according to the day designated by the ERA result between April 2018 and January 2019 in Alpha Fertility Centre. The mean age of these patients was 34.8 and the mean number of blastocysts transferred were 1.2. All transferred blastocysts were euploid. Clinical pregnancy and number of gestational sacs were determined using ultrasound. **Results:** Based on the ERA results, nine of these patients were Receptive; three were Early-Receptive while the other four were Late-Receptive. The clinical pregnancy rate of these patients with FET performed on the day designated by the ERA was 43.8% (7/16) while the implantation rate was 42.1% (8/19). **Conclusions:** Based on our initial experience with the ERA, a personalized FET using a modified progesterone protocol may improve clinical outcome in patients with recurrent implantation failure. Nevertheless, a larger study is required to validate these results.