

Efficient Embryo Selection using Morphokinetic Parameters in Combination with PGT-A

Chew MF, Tee ST, Hoo ML, Surinder S

TMC Fertility, Thomson Hospital

ABSTRACT

Introduction: The non-invasive embryo assessment method using morphokinetic parameters observed via time-lapse monitoring system to deselect the less developmental potential embryo has been applied in human assisted reproduction clinically. Recently, the effectiveness of morphokinetic parameters as predictors of embryo ploidy status has also been widely explored. **Objectives:** In this study we analysed our first batch of embryos from patients cultured using the time-lapse monitoring incubator. **Methods:** The fertility centre started using Embryoscope+ (Vitrolife) since October 2018. Patients with at least 5 oocytes retrieved had all of their embryos cultured in Embryoscope+ until blastocyst stage. Until March 2019, a total 41 patients came back for their first FET cycle. All patients had freeze all cycle and embryo were thawed and transferred in subsequent FET cycle, in which 15 of them had their blastocysts being biopsied for PGT-A. Patient mean age was 32.3 years old. The mean number of embryo transfer was 1.5. Our criteria of embryo selection for biopsy and freezing were based on KIDScore day-5 and Gardner's morphological grading system. **Results:** Patient who had their embryos cultured and selected for transfer using morphokinetic parameters are generally achieved a CPR of 61% (25/41). Patients who had PGT-A performed in addition to the morphokinetic assessment had a CPR of 73.3% (11/15), with the highest CPR 80% (8/10) observed in patient <35 years old. **Conclusions:** Morphokinetic assessment used in combination with chromosomal screening may ultimately help identify euploid embryos with the highest implantation potential, with up to 80% of clinical pregnancy rate recorded in selected patient population.

Induction of Labour compared to Expectant Management in Term Nulliparas with Prolonged Latent Phase of Labour: A Randomized Controlled Trial

Patrick Naveen Sargunam, Lindy Li Mei Bak, Peng Chiong Tan, Narayanan Vallikkannu, Mat Adenan Noor Azmi, Syeda Nureena Syed Jaafar, Sandar Tin Win, Siti Zawiah Omar

Department of Obstetrics and Gynaecology, Faculty of Medicine, University of Malaya

ABSTRACT

Introduction: There has not been a general consensus on the management of prolonged latent phase. **Objective:** To evaluate induction of labour (IOL) compared to expectant management in nulliparas in prolonged latent phase of labour. **Method:** From 2015 and 2017, nulliparas, ≥ 39 weeks' gestation with prolonged latent phase of labour (persistent contractions after overnight hospitalization), cervical dilation ≤ 3 cm, intact membranes and reassuring cardiotocogram (169 in each arm) were recruited. Participants were randomised to immediate IOL (with vaginal dinoprostone or amniotomy or oxytocin as appropriate) or expectant management (await labour for at least 24 hours unless indicated intervention as directed by care provider). Primary outcome measure was Caesarean delivery. **Results:** 318 women were randomised (159 to each arm). Data from 308 participants were analysed. Caesarean delivery rate was 24.2% (36/149) vs. 23.3%, (37/159), RR 1.0; 95%CI: 0.7, 1.6; $p=0.96$ in IOL vs. expectant arms. Intervention to delivery interval was 17.1 ± 9.9 vs. 40.1 ± 19.8 hours ($p < 0.001$), intervention to active labour 9.6 ± 10.2 vs. 29.6 ± 18.5 hours ($p < 0.001$), active labour to delivery 7.6 ± 3.6 vs. 10.5 ± 7.2 hours ($p < 0.001$), intervention to discharge 2.4 ± 1.2 vs. 2.9 ± 1.4 days ($p < 0.001$) and dinoprostone use was 19.5% (29/149) vs 8.2% (13/159), RR 2.4; 95%CI: 1.3, 4.4; $p=0.01$ in IOL compared with expectant arms respectively. Intrapartum oxytocin use, epidural analgesia and uterine hyperstimulation syndrome, postpartum haemorrhage, patient satisfaction on allocated intervention, during delivery and baby outcome and neonatal outcomes were not significantly different across the trial arms. **Conclusions:** IOL does not reduce Caesarean delivery rates but intervention to delivery and hospital discharge durations are shorter. Patient satisfaction scores are similar. IOL for prolonged latent phase of labour could be performed without detriment to expedite delivery.