

عنوان مقاله:

Association between early embryo morphokinetics plus cumulus cell gene expression and assisted reproduction outcomes in polycystic ovary syndrome women

محل انتشار:

هشتمین کنگره بین المللی و جشنواره دانشجویی طب تولید مثل و سومین کنگره بین المللی ژنتیک تولید مثل (سال: 1398)

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خلاصه مقاله:

Background: It is shown that oocyte cumulus cells are associated with embryo quality and reproductive outcomes in assisted reproductive technology. **Objective:** To evaluate a combination of time-lapse morphokinetic parameters and cumulus cell gene expression in polycystic ovary syndrome (PCOS) women for predicting assisted reproductive treatment outcome. **Materials and Methods:** A total of 547 embryos from 100 intracytoplasmic sperm injection (ICSI) cycles were evaluated. Fifty women with PCOS and 50 women who were categorized as tubal factor infertility were recruited. Time-lapse records were annotated for time to pronuclear fading (tPNf), time to 2 to 8 cells (t2-t8), reverse cleavage, direct cleavage and also for the presence of multinucleation. Expression levels of three genes involved in mitotic divisions, diaphanous-related formin 2 (DIAPH2), nibrin (NBN) and NIMA-related protein kinase (NEK4), were measured in 100 associated cumulus cell samples using quantitative real-time polymerase chain reaction. **Results:** Expression of DIAPH2 and NBN was significantly higher in the embryos of PCOS patients that resulted in implantation, biochemical and clinical pregnancies as well as live birth compared with embryos that were negative for these outcomes ($p < 0.01$). However, in the tubal factor group, NBN gene expression was significantly higher in embryos resulting in biochemical pregnancy, clinical pregnancy and live birth ($p < 0.01$) only. Multivariate logistic regression analysis showed that tPNf together with DIAPH2 gene expression were independent prognostic factors of clinical pregnancy rate and live birth in both groups. **Conclusion:** Some time-lapse embryo parameters may be related to cumulus gene expression and clinical outcome. Furthermore, the expressions of cumulus cell genes involved in mitotic divisions are significantly associated with ICSI outcome using Day 3 embryo transfer.

کلمات کلیدی:

Polycystic ovary syndrome, Pregnancy outcome

لینک ثابت مقاله در پایگاه سیویلیکا:

