

4th ASPIRE

Osaka, Japan, 2012.08.31-09.02

Hyaluronan-enriched transfer medium improves clinical pregnancy rate on blastocyst transfer with low grade trophectoderm.

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OBJECTIVE: Effects of hyaluronan-enriched transfer medium (HETM) and of the grade of trophectoderm (TE) on its implantation rate after frozen-thawed single blastocyst transfer were assessed based on the latest finding that TE grade is more important than inner cell mass (ICM) to predict live birth outcome (Ahlstrom et al., 2011).

METHODS: The study was approved by a local ethical committee and informed consent was obtained. This study was taken from 293 patients who had repeated implantation failure and were performed single frozen-thawed blastocyst transfer from January to November 2011 using HETM (N = 194) and culture medium (N = 99, control) as transfer medium. The degree of blastocyst expansion was between 3 and 5, its ICM grade was A or B, and its TE grade was B or C according to Gardner's criteria (1999) before cryopreservation. To quantify the grade of blastocyst, blastocyst quality scoring method (BQS, Khurram et al., 2007) was used. Effect of transfer medium was analyzed in each TE grade (B and C) by unpaired Student's t-test.

RESULTS: There were no differences in the patients' background (age, times of transfer, endometrial thickness and BQS) between transfer media in each TE grade. There was also no difference in the implantation rate between HETM (50.0%) and control (50.0%) in the B-grade of TE. However, the implantation rate in HETM (55.3%) was higher ($P < 0.05$) than that in control (26.8%) in the C-grade of TE.

CONCLUSIONS: The present study suggested that HETM improved the developmental capacity of blastocyst with low grade TE.