

The hyaluronan-enriched transfer medium improves embryo implantation and supports the embryo growth.

K. Tomita, S. Hashimoto, Y. Akamatsu, M. Satoh, T. Maezawa, T. Himeno T. Inoue, Y. Ohnishi, K. Ito, Y. Nakaoka, Y. Morimoto.
IVF Namba Clinic, Osaka, Japan

【Purpose】

Hyaluronan, one of the extracellular matrix, involves cell adhesion. The embryo expresses hyaluronan receptor in trophoectoderm. Furthermore, much of hyaluronan is secreted at the time of implantation, so it has been considered that hyaluronan improves embryo implantation. The EmbryoGlue[®] is hyaluronan-enriched transfer medium (HETM) developed by Vitrolife, Sweden. In the 55th meeting of Japan Society for Reproductive Medicine, we reported that HETM improved the implantation rate at frozen-thawed single blastocyst transfer. In the present study, we report the clinical follow-up investigation.

【Method】

The patients who were performed frozen-thawed single blastocyst transfer from January to May 2010. Ninety five patients had previous implantation failure were randomly divided into two groups: 36 HETM group and 59 control group. The medium of control group does not contain hyaluronan.

【Result】

The mean age and the endometrial thickness were not different between two groups. There was significant difference in the implantation rate between HETM and control groups (60.0 % vs. 36.1%, $P<0.05$). Furthermore, the birth rate in the HETM group was significantly higher than that of control group (50.0 % vs. 26.7 %, $P<0.05$). The abortion rate was not different between HETM and control groups (13.6 % vs. 13.6 %). There was no difference in the gestational age and birth weight (gestational age: HETM 39.5 weeks vs. control 39.1 weeks, birth weight: HETM 2984.6 g vs. control 3130.3 g). The AP score and sex ratio were not different between HETM and control groups (AP score: 9.2 vs. 9.3, sex ratio: 0.38 vs. 0.39). The congenital anomalies did not occur in both groups.

【Conclusion】

The HETM increased the implantation and birth rate. On the other hand, the abortion rate was not different comparing to control. The present study suggested that HETM is effective for initial embryo implantation, consequently birth rate is improved.