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Trial of the hyaluronan-enriched transfer medium.

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【Objective】The hyaluronic acid (HA) is a glycosaminoglycan contained in the uterine fluid and combined with glycoprotein CD44 on the surface of trophoblastic cell to play a significant role for promoting the adhesion of blastocyst with endometrium. EmbryoGlue®, hyaluronic acid rich transfer mediu, was developed to improve implantation. The purpose of the present study was to assess the effect of EmbryoGlue® on implantation and clinical pregnancy in fresh and frozen-thewed embryo transfer.

【Materials and Methods】All patients who failed IVF treatment at IVF Osaka clinic from January 2011 to December 2011 were applied on this study with informed consent. A total of 854 patients, of which 110 patients with fresh embryo transfer (Fresh), 561 with frozen-thewed embryo transfer in the hormone replacement cycles (FET-H) and 183 in the natural cycles (FET-N) were involved in the present study. Patients were randomized to two transfer groups (EmbryoGlue or control).

In the control group, embryos were transferred in a medium (IVC-3®, In Vitro Care) without hyaluronic acid. A pregnancy was determined when a gestational sac was detected by transvaginal ultrasound.

【Results】There were no differences in the endometrial thickness at transfer and patient's age in

EmbryoGlue and control. EmbryoGlue® increased the pregnancy rate of FET-N in 40 years old or older compared to contrl (41.86% vs 12.00%, $p<0.05$). Moreover, the implantation rate of FET-N in the same age group was tend to be increased (23.38 % vs. 7.50%, $p=0.06$). No significant difference was observed in any other group below 40 years old.

【Conclusions】EmbryoGlue® seems to be beneficial in natural cycle frozen-thawed embryo transfer in 40 years or older group. No detrimental effect was determined with EmbryoGlue.