

I S—105

Effect of Medicult and Human Tubal Fluid culture media and cumulus cell coculture on early mouse embryo development in vitro

Y-I Lee, H-J Park, Y-S Kwon

Dept. of Ob/Gyn, College of Medicine, Chonnam National University, Kwang-ju, Korea

Objectives: This study was to investigate whether Ham's F-10 used in assisted reproductive technology(ART) could be replaced with newly-introduced Medicult or Human Tubal Fluid(HTF) media, and the rate of embryo development could be enhanced by cumulus cell coculture.

Methods: Ham's F-10, Medicult, and HTF media supplemented with 0.4% bovine serum albumin (BSA) were used. Two-cell embryos were obtained from oviducts of mated F₁ hybrid female mice superovulated by pregnant mare serum gonadotropin (PMSG) and human chorionic gonadotropin (hCG). Cumulus cells for coculture were obtained from oviducts of ICR female mice superovulated by PMSG and hCG. Two-cell embryos were cultured in Ham's F-10, Medicult, and HTF media respectively to observe and compare the rate of embryo development. In addition, two-cell embryos were cultured in these three media for 24, 48, 72, 96 hrs with or without cumulus cell, and rates of embryo development were investigated and compared.

Results: As for the rate of embryo development to hatched blastocyst after 96hr. culture, HTF(87.5%) and Ham's F-10(85%) were significantly higher than Medicult (70.5%). The beneficial effect of embryo development by cumulus cell coculture on two-cell mouse embryo among these three media was enhanced significantly in Medicult (control 88.5% versus coculture 98.5%) by 24 hrs, and was not enhanced statistical significantly but slightly elevated in Ham's F-10 (86.5% versus 95.5%) and HTF (91.3% versus 96.9%) by 48 hrs, but rates of embryo development were similar between control and coculture group in all three media by 96 hrs. Significant differences were not shown in three media, but HTF showed generally high tendency of the enhancing effect of embryo development and the beneficial effect of embryo development by coculture.

Conclusions: As a result of culturing two-cell embryos in three media for 96 hrs, HTF and Ham's F-10 showed higher rate of embryo development than Medicult. As for the beneficial effect of coculture, only Medicult showed transiently significant improvement of embryo development. Considering that coculture effect of good quality media may be not so great, Ham's F-10 and HTF are more stable media than Medicult. Accordingly, HTF may be considered to be a suitable medium to replace with Ham's F-10, however the present study shows that Medicult or HTF is not able to replace with Ham's F-10 in ART.

I S—106

Transcervical fallopian tube catheterization and recanalization for proximal tubal obstruction under simultaneous hysteroscopic and laparoscopic guidance.

M. Kamel, A. Abdel-Aziz.

Dept. of Obstetrics & Gynec. Alexandria University, Egypt.

Tubal cannulation is offering an easy access to the lumen of the fallopian tube, and should therefore be considered as a valuable tool to evaluate proximal tubal obstruction prior to referral for tubal microsurgery or in-vitro fertilization.

Tubal catheterization, using the "Rosch thurmond coaxial catheter set" was attempted in 140 tubes confirmed to be proximally obstructed at laparoscopy. Successful recanalization, without any complication, was achieved in 70 of these tubes. Initial patency rate was 50%. The recanalized tubes have been followed up after two months and continued patency rate was 100%. Simultaneous hysteroscopy and laparoscopy not only improved the safety of the procedure, but also allowed a fully comprehensive evaluation of the infertile woman during a single admission to the operating room,

Transcervical fallopian tube catheterization is a safe, effective, minimally invasive and inexpensive diagnostic and therapeutic approach to proximal tubal obstruction.