

126 Evaluation of Hypoosmotic Swelling Test (HOST) and Eosin-Y Supravital staining (EoY) as a method of examining sperm fertility potential (SFP). T.Kondo, B.Ishizuka, K.Watanabe, Y.Ohono, H.Horikoshi, Y.Kuribayashi, J.Saito, H.Hamada, Dept. Obst. and Gynec., St. Marianna Univ. Sch. Med., Kanagawa

We compare the ability of HOST and EoY to examine human SFP using Zona Free Hamster Egg sperm penetration test (ZSPT) as a standard. HOST, EoY, ZSPT and computerized automatic semen analysis (CASA) were performed on a same day using semen analysis (CASA) were performed on a same day using semen from one ejaculation in 44 women. CASA was performed before and after the sperm separation by Percoll gradient (P). P as a result, percentage of swollen sperm by HOST had no correlation with EoY non-staining ratio. sperm motility before P showed significant correlation with HOST and EoY ( $r=0.377$ ,  $P<0.05$  /  $r=0.602$ ,  $P<0.02$ , respectively). Sperm motility after P was significantly correlated with EoY ( $r=0.489$ ,  $P<0.02$ ) but not with HOST. Also, ZSPT had significant correlation with EoY ( $r=0.489$ ,  $P<0.02$ ) but not with HOST. Thus, EoY was revealed to be a better method than HOST to examine SFP when ZSPT was used as a standard.

127 Perinatal outcome after IVF-ET at Suzuki Hospital. S.Chida, Y.Odawara, S.Mori, S.Iida, M.Suzuki, Dept. Obst. Gynec. and Reprod. Biol., Suzuki Hospital, Miyagi.

The in vitro fertilization and embryo transfer (IVF-ET) program was initiated in January 1987 and 708 embryo transfers have been operating in 514 women. 161 pregnancies were achieved till December 1990 and 70 of these pregnancies already ended with a live-birth (58 singletons, 12 twins), 38 pregnancies are ongoing and 53 pregnancy losses (49 abortions and 4 ectopic pregnancies) were recognized. The median duration of pregnancy for the 82 born babies was  $38.7 \pm 1.2$  weeks. Premature delivery before the 37th week occurred in 5.2% (3/58) of the singletons and 30.0% (4/12) of the twins. The median birth-weight of the singletons ( $2959 \pm 519$ g) and the ratio of male and female (1.3=46:36) were no differences significantly between IVF group and a control group of non-IVF pregnancies. However, the ratio of cesarean section in IVF group was higher than the control group. One perinatal death which was born at 26th week and a couple of mental retarded twin babies of unknown origine after normal vaginal delivery were recognized. All the other babies have no problems and no abnormalities.

128 Evaluation of three-layer Percoll gradient method for semen manipulation in IVF-ET. M.Tanikawa, A.Sekijima, T.Iwabe, Y.Onohara, H.Terado, T.Harada, Y.Mio, N.Terakawa, Dept. Obst. and Gynec., Tottori Univ. Sch. Med., Tottori.

We compared three-layer Percoll gradient method (Percoll method) with swim up method for semen manipulation in IVF-ET. There were no differences in recovery of motile sperm and improvement of sperm motility between Percoll and swim up method. Percoll method significantly improved sperm forward progression in abnormal semen samples. In IVF-ET, fertilization and cleavage rate in Percoll method were significantly higher than those in swim up method. The number of blastomere at ET in Percoll method was significantly larger than that in swim up method in the samples of oligoasthenozoospermia. These results suggest that Percoll method may increase sperm fertilizing capacity especially in abnormal semen samples. We propose that three-layer Percoll method is useful for semen manipulation in IVF-ET.