outcomes with reduced risks of multiple pregnancies, they still have potential risks of developmental arrests of IVF embryos. The aim of this study was to evaluate clinical outcomes of day-4 ET and compare the efficacy of day-4 ET with other days of ET in our center.

Methods: From January 2006 to August 2007, total 1124 cycles were analyzed - 897 cycles of day-3, 121 cycles of day-4, and 106 cycles of day-5 ET. The cycles with number of retrieved oocytes < 5, female age > 37 and/or any genetic factors were excluded. The rates of oocyte maturation, fertilization, good embryo, and clinical pregnancy were compared among three groups. Chi square test and ANOVA were used for statistic analysis. P values < 0.05 were considered significant.

Results: There were no significant differences among three groups with respect to mean age of female and rates of oocyte maturation, fertilization and good embryo. Clinical pregnancy rate of day-4 ET (55.4%) was significantly higher than that of day-3 ET (41.5%) (p=0.0051). There was no significant difference in clinical pregnancy rates between day-4 and day-5 ET.

Conclusion: Our results show that day-4 ET could provide clinical pregnancy rates as high as day-5 ET and it is significantly higher than that of day-3 ET. We suggest that day-4 may be an alternative day for ET to achieve a higher clinical pregnancy outcome with reduced risks of multiple pregnancies and developmental arrests of embryos.

O-7 Mechanism of Action of 2,3,7,8-tetrachlorodibenzo-p-dioxin on the Inhibition of Ovulation in Gonadotropin-treated Immature Rat Ovary

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Objectives: The purpose of this study was to investigate the mechanism of TCDD action on ovulation in immature rats.

Methods: 1. histology analysis 2. ovulation check 3. ovarian weight 4. thymidine incorporation 5. western analysis 6. in vitro follicle growth 7. FACS analysis 8. northern analysis 9. MTT assay 10. cytocrome c release.

Results: Immature rats administered with TCDD (32 μg/kg) by gavage one day before the injection of PMSG showed 92% decrease in ovulation rate. The ovarian weight and the number of preovulatory follicles were significantiy reduced in TCDD-treated animals at 48 h after PMSG. Treatment with TCDD in vitro suppressed the proliferation of granulosa cells stimulated by FSH/activin. Furthermore, treatment with α-naphthoflavone, an antagonist of aromatic hydrocarbone receptor, reversed the suppressive effect of TCDD on granulosa cell proliferation. Bromodeoxyuridine staining also demonstrated the inhibition of granulosa cell proliferation by TCDD in vivo. Interestingly, TCDD treatment markedly decreased S phase cells, but increased G2/M phase cells revealed by FACS analysis. Lastly, Northern analysis showed the suppression of cyclin D2 expression.

Conclusion: The present data demonstrate that TCDD reduces the ovulation rate in rats by inhibiting cell cycle progression and thus proliferation of granulosa cells.