

P-4 Dose Dependent Effects of Morindae Officinalis Radix Extract Solution on the Reproductive Capacities in the Mice

Heo JW¹, Cho JH¹, Jang JB¹, Lee KS¹

¹*Department of Oriental Obstetrics & Gynecology, Kyunghee University*

Background & Objectives: These studies were undertaken to evaluate the effects of the administration of different concentrated Morindae officinalis Radix extract solution on the spermatogenic abilities such as concentration, motility and morphological normality of sperm from the testis and the activities of sperm hyaluronidase, testicular peroxidase and testicular catalase.

Method: We used the 2-month-old mice and administered the extract solution of Morindae officinalis Radix in the different concentration once a day for 60 days. The control group was administered the normal saline in the same way and duration. We examined the number of total, motile and normal sperm from the cauda epididymis, the activities of sperm hyaluronidase, testicular peroxidase and testicular catalase. Also we observed changes of isolated testis before and after administration of Morindae officinalis Radix extract solutions in the mice. And we compared to the testicular tissue especially seminiferous tubules between control and treated group by histochemical methods.

Results: The significant dose-dependent differences were observed in the concentration of total sperm, the motility and normality of spermatozoa of the Morindae officinalis Radix extract solution administered groups compared to the control group, respectively. In the histological analysis of the testicular tissues, the enlargement of testicular lobe diameter and apparent vasculogenesis between testicular lobes were observed in the Morindae officinalis Radix extract solution administered groups compared to the control group, respectively. Also, the activity of hyaluronidase was significantly increased in the Morindae officinalis Radix extract solution administered groups compared to the control group. In the antioxidant activity analysis, the activity of testicular peroxidase was significantly increased in the Morindae officinalis Radix extract solution administered groups compared to the control group, respectively.

Conclusions: This study shows that Morindae officinalis Radix has the beneficial effect on the concentration, morphology and motility of sperm, the activities of sperm hyaluronidase and testicular peroxidase. We can suggest that Morindae officinalis Radix extract solution be useful for the treatment of male sexual dysfunctions and infertility.

P-5 Effects of Isolating Methods (Mechanical or Enzymatical) on Structure of Pre-antral Follicles in Mouse

박기상¹ · 송해범² · 이택후¹ · 전상식¹

경북대학교병원 산부인과¹, 대구대학교 생명자원학부²

Background & Objectives: This study was conducted to evaluate the stable and effective isolating

method of pre-antral follicles from ovary by means of mechanical or enzymatical method in mice.

Method : Mouse (ICR, 3~4 weeks old) ovarian pre-antral follicles of 70~130 μm (A: =90; B: 91~110; C: 111~130 μm) in diameter were isolated by mechanical method (group I) using syringe needles or by enzymatical method (group II) using 600 IU collagenase and DNase and cultured individually in 20 μl droplet of media under mineral oil on culture dish for 8 days.

Results: On 8th day after culture, disruption rate ($84.4\pm 18.8\%$ vs. $9.4\pm 18.8\%$) was significantly higher ($p<0.05$) in group II than in group I. Survival rate ($88.0\pm 28.9\%$ vs. 0%) was significantly higher ($p<0.0000$) in group I than in group II. There was no differences in survival rate among different initial sized pre-antral follicles in group I (A: $86.7\pm 12.5\%$, B: 100% , C: $69.2\pm 30.0\%$, NS) or group II (A: 0% , B: 0% , C: 0% , NS) respectively.

Conclusions: In conclusion, compared to mechanical dissection, enzymatical isolation of pre-antral follicles resulted in higher follicular disruption rate. Survival rate was not affected by different initial sizes of pre-antral follicles in mice.

P-6 The Clinical Efficacy of Low-dose Aspirin and Prednisolone in IVF-ET Patients Undergoing COH with GnRH Agonist Long Protocol

Kim YJ¹, Choi YS¹, Jee BC¹, Ku SY^{1,2}, Suh CS^{1,2}, Choi YM^{1,2},
Kim JG¹, Moon SY^{1,2}, Kim SH^{1,2}

¹Department of Obstetrics and Gynecology, College of Medicine, ²Institute of Reproductive
Medicine and Population, Medical Research Center, Seoul National University, Seoul, Korea

Background & Objectives: To determine whether the use of low-dose aspirin and prednisolone improves the outcomes in in vitro fertilization and embryo transfer (IVF-ET) patients undergoing controlled ovarian hyperstimulation (COH) with GnRH agonist long protocol.

Method: Two hundred and forty IVF-ET cycles were assigned to four groups: control group (aspirin(-) & prednisolone(-), n=59), low-dose aspirin group (aspirin(+)) & prednisolone(-), n=43, Group 1), prednisolone group (aspirin(-) & prednisolone(+), n=80, Group 2), and low-dose aspirin and prednisolone group (aspirin(+)) & prednisolone(+), n=58, Group 3). The COH and pregnancy outcomes were retrospectively compared among the four groups.

Results: Group 1 showed a significantly higher fertilization rate compared to control group (73.6% vs. 64.1% , $p=0.050$). Serum estradiol (E2) level on hCG day was 995.5 ± 767.5 pg/ml in control group, $1,550.7\pm 1,254.5$ pg/ml in group 1, $1,469.2\pm 1,206.6$ pg/ml in group 2 and $1,796.0\pm 1,548.0$ pg/ml in group 3 and higher in the three treatment groups compared to control ($p=0.012$, $p=0.006$, $p<0.001$, respectively). Cumulative embryo score (CES) per number of embryo transferred was also higher in Group 1 (17.4 ± 8.4 , $p=0.001$) and 3 (16.0 ± 6.1 , $p<0.001$) compared to control (12.2 ± 5.1). There were no significant differences in the implantation and the pregnancy rates among the four groups.