

**Results:** 대상군의 평균연령은 33.4 (20~43)세였으며 정계정맥류 grade I, II 및 III가 각각 9, 8 및 8례였다. 정액내 활성산소치는 평균  $18.8 \pm 5.8 \times 10^3$  A.U.였으며 정계정맥류의 grade에 따라 비교시 I, II 및 III에서 각각  $12.4 \pm 6.7 \times 10^3$ ,  $19.5 \pm 7.7 \times 10^3$  및  $22.4 \pm 7.4 \times 10^3$  A.U.로 grade II 및 III에서 grade I에 비해 유의하게 높았다 ( $p=0.021$ ). 환측 고환의 크기와 정액내 활성산소치 사이에는 유의한 상관관계가 없는 것으로 나타났으며 ( $r=-0.47498$ ), 환측과 대측 고환의 크기차이가 3 ml 이상인 군과 미만인 군에서 활성산소치는 각각  $19.2 \pm 6.3 \times 10^3$  및  $18.2 \pm 7.8 \times 10^3$  A.U.로 유의한 차이가 없었다.

**Conclusions:** 정계정맥류를 가진 환자에서 정액내 활성산소치는 정계정맥류의 grade와 유의한 상관관계가 있음을 확인할 수 있었다. 이는 활성산소가 정계정맥류환자에서 불임을 야기하는 주요한 원인 중의 하나이며 정계정맥류환자의 수정능을 예측할 수 있는 지표로서 활용가능성을 뒷받침하는 결과로 생각된다.

## O-11 (임상)      Effects of Maternal Age and Embryo Quality on the Aneuploidy of Embryos from Translocation Carriers in PGD-FISH Cycles

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**Background & Objectives:** Preimplantation genetic diagnosis (PGD) with fluorescent in situ hybridization (FISH) has been effectively applied for aneuploidy screening in embryos with high risk of chromosomal abnormality. This study was performed to evaluate the aneuploidy pattern of preimplantation embryos from translocation carriers in PGD-FISH cycles.

**Method:** Forty cycles of PGD-FISH for translocations, reciprocal translocations ( $n=32$ ) and Robertsonian translocations ( $n=8$ ), were carried out at our center last year. Laboratory and clinical data from PGD-FISH cycles were analyzed retrospectively. Specific FISH probes for translocated chromosomes of each case and for chromosome 18 as control chromosome were used to screen the aneuploidy of 502 embryos. Single blastomeres were biopsied from fresh and frozen-thawed embryos on the day-3 after fertilization. The normal or balanced embryos were selected and transferred to mothers' uterus.

**Results:** The proportion of normal or balanced embryos was 15.9% and 20.0% in reciprocal and Robertsonian translocations, respectively. Normality of chromosome 18, the chromosome of unrelated translocation, was similar in reciprocal (79.6%) and Robertsonian (79.0%) translocations. Incidence of normal or balanced embryos from female translocation carriers was significantly lower than that of the male carriers (14.9% vs 23.0%,  $p<0.05$ ). The aneuploidy of chromosome 18 was significantly higher in embryos from advanced maternal age and poor quality embryos than that in younger age (70.6% vs 82.4%) and good embryos (72.8% vs 87.2%), respectively.

**Conclusions:** Advanced maternal age and poor quality embryo were closely correlated with the higher

aneuploidy rates of the chromosome 18 in the embryos from translocation carriers. We suggest that the analysis of both the chromosomes of related and unrelated translocations, such as comparative genomic hybridization and DNA microarray, might be important and valuable for the successful pregnancy with normal karyotype in PGD for translocation carriers.

## O-12(임상)      Prognostic Implication of Serum Vascular Endothelial Growth Factor Levels Measured on the Day of hCG in Superovulation with Intrauterine Insemination Cycle

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**Background & Objectives:** To investigate whether serum levels of vascular endothelial growth factor (VEGF) reflects outcomes of superovulation and predicts pregnancy in intrauterine insemination (IUI).

**Method:** Thirty-one infertile couples were included with a duration of infertility of one year or more. Superovulation was performed using clomiphene (100 mg/d on day 3~7) in combination with human menopausal gonadotropin (150 IU every other day starting on day 5). When mature leading follicle reached 19 mm in diameter and the urinary LH test was negative, urinary hCG 5,000 IU was given, and then IUI was performed 36~40 hrs later. Blood were drawn on the day of hCG, and the concentrations of serum estradiol and progesterone were measured using a radioimmunoassay kit. Serum VEGF-A concentrations were measured by ELISA.

**Results:** Serum VEGF levels were similar between pregnant (n=7) and non-pregnant group (n=24). A logistic regression analysis revealed that serum VEGF levels are only associated with mature follicle count.

**Conclusions:** A negative correlation between serum VEGF levels and mature follicle count indicates that serum VEGF levels are predictor for superovulation outcome in IUI cycles.