P-5 다낭성 난소증후군 환자에서 메트포민 치료의 효과와 인슐린 저항성에 관한 연구

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Background & Objectives: 다낭성 난소증후군 여성에 있어서 배란 및 월경 회복에 미치는 메트포민의 효과와 인슐린 저항성의 관련여부를 파악하고자 한다.

Method: 2001년 9월부터 2003년 10월까지 서울대학교병원 산부인과에 내원한 여성 중 다낭성 난소 증후군으로 진단된 23명을 대상으로 3개월간 메트포민을 투약 후 규칙적인 월경 또는 배란의 유무를 조사하였고 각 군의 인슐린 저항성의 양상을 비교하였다.

Results: 23명의 다낭성 난소증후군 환자 중 11명 (47.8%)에서 메트포민 투약 후 규칙적인 월경 또는 배란이 회복되었으며, 12명 (52.2%)에서는 메트포민을 3개월 복용 후에도 만성적인 무배란이 지속되었다. 체질량 지수는 각각 23.04±8.32 kg/m², 22.24±3.63 kg/m²으로 두 군간에 유의한 차이는 없었다. 또한 HOMA 지수는 메트포민에 반응을 보인 군에서는 4.07±4.39, 반응을 보이지 않은 군에서는 2.69±1.16으로 두 군간에 유의한 차이가 없었다.

Conclusions: 비만하지 않은 다낭성 난소증후군 여성의 경우, 인슐린 저항성 여부에 상관 없이 메트 포민이 월경 및 배란 회복에 효과가 있을 것으로 생각된다.

P-6 Effect of the Quality and Origin of Sperm on Fertilization, Zygote Morphology, Early Cleavage and Pregnancy Outcome after ICSI

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Background & Objectives: To investigate the effect of the quality and origin of sperm on zygote morphology, first cleavage time and pregnancy outcome after ICSI. Study groups were divided into five according to the quality and origin of sperm. A; normal (control, n=415 embryos/ 97 cycles), B; mild oligoasthenoteratozoospermia (OATs, n=536 embryos/ 127 cycles), C; severe OATs (n=149 embryos/ 38 cycles) in the ejaculated sperm group and D; testicular sperm from obstructive azoospermia (n=45 embryos/ 11 cycles), and E; testicular sperm from non-obstructive azoospermia (n=38 embryos/ 8 cycles).

Method: A total of 341 cycles undergone ICSI from May 2002 to March 2003 at MizMedi Hospital were studied respectively. Zygote morphology (size difference, average size, nucleoli patterns of PN and cytoplasmic halo) were compared. Nucleoli patterns were subdivided into three groups; symmetric, asymmetric, asymmetric,

metric, and abnormal pattern. The first cleavage time and embryo development were evaluated at 24 to 26 hours and on day 3 after ICSI, retrospectively. Clinical pregnancy and implantation rate were investigated.

Results: Patient age, cytoplasmic halo, size difference and average size of PN did not differ among the groups. Also, zygote morphology except nucleoli patterns did not differ among the groups. However, fertilization rates were higher ejaculated sperm groups than testicular sperm groups. Zygotes with a symmetric nucleoli or early cleavage showed a significantly higher developmental rate than the others. The ratio of zygotes with a symmetric nucleoli pattern or early cleavage embryos did not differ among the groups except group E. The ratio of good embryos arose from zygotes with a symmetric nucleoli pattern or early cleavage and pregnancy outcome did not differ among the groups except group E. However, in group E, the ratio of good embryos was significantly lower than in the other groups although the zygotes showed a symmetric nucleoli pattern or early cleavage. Pregnancy outcomes of group E were also poorer than the other groups; however, there was no statistically significant difference.

Conclusions: In this study, the quality and origin of sperm, especially testicular sperm from non-obstructive azoospermia, affected not only nucleoli pattern of zygote morphology and first cleavage time but also further embryo development and pregnancy outcome, although the zygotes and embryos showed good morphology. In light of this study, we suggest that developmental competency after fertilization may be affected by some factors derived from sperm, in the case of non-obstructive azoospermia.

P-7 Combined Score System of PN Morphology, Early Cleavage, and Embryo Development is Highly Predictable of Pregnancy Outcome in Human ART Programs

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Background & Objectives: Zygote morphology and the time of cleavage are related to embryo quality and successful pregnancy. In this study, we examined the relationship between combined score for PN morphology and EC and embryo development and further clinical pregnancy outcome.

Method: A total of 229 patients which had undergone IVF-ET from May 2002 to November 2002 in MizMedi hospital was studied. PN morphology was graded according to nucleoli pattern (n=994) and early cleavage (EC) was evaluated at 24~26 hr post-insemination or ICSI (n=667). Cleaved embryos were transferred to patients at day 3 after embryo evaluation. The group of embryo transfer was divided into five groups according to the nucleoli pattern of PN and EC (group A; only P1 + P2 ET, group B; all pattern except P1 + P2 ET, group C; no EC ET, group D; only EC ET, group E; combined group A and group D).

Results: In nucleoli pattern of PN, significantly higher rate of good quality embryos were derived from pattern 1 and 2 (same pattern of several nucleoli present in both PN, P1/P2) zygotes than P6 zygotes. Also, developments of EC group were significantly rapid than that of 2PN group at the same time. Moreover, P5/P6 embryos showed late to start cleavage than P1/P2 embryos. The pregnancy rate of group A was