전핵의 형태, 배아 발달의 질을 비교 분석하였다.

결 과: 회수직후의 난자의 질은 다양한 형태를 근거로 한 전핵의 질, 배아 발달의 질에 유의성 있게 영향을 주었다 ($p<0.05$). 또한 전핵시기에는 비록 균등한 인의 분포 양상 (equaled nucleoli distribution pattern)을 보여 양질로 판정된 경우에 있어서도 회수시 난자의 질이 좋았던 난자들이 나빴던 난자들보다 양질의 배아로 발달하는 정도가 높은 것으로 나타났다 ($p<0.05$).

	PN of good morphology		Embryos of good development	Embryos of bad development
Good quality oocytes	Average PN size of ≥26.5 μm	126/520 (24.2%)[a]	83/126 (64.3%)	28/126 (22.2%)
	Equaled nucleoli distribution	452/520 (86.9%)[b]	265/452 (59.5%)[d]	114/452 (25.2%)
	Cytoplasmic halo	323/520 (52.1%)[c]	198/323 (60.7%)	83/323 (25.7%)
Poor quality oocytes	Average PN size of ≥26.5 μm	20/143 (14.0%)[a]	10/20 (50.0%)	7/20 (35.0%)
	Equaled nucleoli distribution	112/143 (78.3%)[b]	53/112 (46.4%)[d]	32/112 (28.5%)
	Cytoplasmic halo	65/143 (45.5%)[c]	35/65 (53.8%)	18/65 (27.7%)

*[a], [b], [c], [d]; $p<0.05$, X^2 test

결 론: 접합자 시기 전핵의 형태가 비록 동일하게 좋을 지라도 배아의 발달 양상은 회수직후 난자의 질과 연관이 있는 것으로 나타나, 이후 발달양상이 좋은 양질의 초기 배아를 정확히 선택하기 위해서는 전핵의 형태뿐 아니라 회수직후 난자의 질도 같이 고려하는 것이 타당한 방법이라 생각된다.

O-13 Ki-67, Nuclear Factor-κB (NF-κB), and Cyclooxygenase-2 (COX-2) Expression in Endometrial Tissue with Endometriosis

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Objectives: It is well known that cellular proliferation of endometrial epithelial and stromal cells was increased in patients with endometriosis in vitro. COX-2 expression in endometrium was believed to be correlated with pathological abnormalities in endometriosis. NF-κB regulate cell proliferation and many other cellular function in various human cells. The Ki-67 protein is a nuclear and nucleolar protein, which is

tightly associated with somatic cell proliferation. We investigated the expression of Ki-67, NF-κB, and COX-2 in endometrial tissue, and the incidence of polyps with or without endometriosis.

Materials and Methods: The study group was 92 patients with endometriosis and the control group was 90 patients without endometriosis. The subjects were 30 samples. The 20 samples consisted of endometrial tissue with endometriosis, 10 samples with polyps, and 10 samples without polyps. The remaining 10 samples were endometrial tissue which had polyps without endometriosis. The control subjects were 10 samples of normal endometrial tissue. Expression of Ki-67, NF-κB, and COX-2 was immunohistochemically investigated by polyclonal antibody.

Results: Endometrial polyps were found in 53 of 92 (57.6%) women with endometriosis but only in 15 of 90 (16.7%) women without endometriosis. High expression of Ki-67 was shown in endometrial tissue with endometriosis with or without polyps. The expression of NF-κB and COX-2 was increased in endometrial tissue with polyps with or without endometriosis, but normal endometrium showed lower expression.

Conclusion: It is suggested that endometriosis may induce growth of endometrial polyps. It may be caused by the increased expression of Ki-67, NF-κB, and COX-2 in eutopic endometrium with endometriosis which is possibly due to the increase of the cellular proliferation and change of the cellular function.

O-14 Cultivation of Immature Male Germ Cells in Biodegradable Scaffold

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Objectives: Successful in vitro differentiation of spermatogenic cells is a potent method for the treatment of male sterility due to spermatogenic arrest. Many researches have been done to improve the culture efficiency and recent studies have shown that round spermatids could develop from the in vitro culture of 18 day-old mouse germ cells. The present study examined a new device for the culture of mouse male cells by assessing meiotic maturation of spermatogenic cells.

Materials and Methods: ICR male mice of 18 day-old were used. Testes were decapsulated and seminiferous tubules were dissociated enzymatically to release both somatic and germ cells. For the scaffold culture, dissociated cells were repacked in a biodegradable scaffold (InnoPol, InnoTech Medical Inc.) and then cultured for up to 18 day in modified RPMI 1640 medium at 32℃ with 5% CO_2 in air. For the monolayer culture, a group of dissociated cells were seeded into petri dish containing the same medium. For the organ culture group, fragments of seminiferous tubule were loaded onto a 0.22 μm membrane filter and cultured in an organ culture dish usign the same medium. After culture, cells were smeared onto L-lysine coated microscope slides and examined for the presence of transition protein-2 (TP-2) known to