

향을 받는지에 대하여 알아보았다.

Methods: 2006년 4월부터 2007년 4월까지 불임을 주소로 미세수술적 정계정맥류 절제수술을 받았던 18명의 환자에서 수술전후에 정액검사의 다른 지표들과 함께 정자 핵내 DNA integrity가 어떻게 변화하였는지 조사하였다. 정자 핵내 DNA integrity를 측정하는 방법으로 Comet assay를 시행하였고 Comet assay를 통한 DNA 손상 정도는 DNA fragmentation index(DFI)로 나타내었다.

Results: 수술 후 4개월에 모든 환자에서 재발의 소견은 보이지 않았으며, DNA 손상 정도를 나타내는 평균 DFI는 수술 전에 19.3%, 수술 후에 13.7%로 유의한 변화를 보였다. 수술 전 DFI가 10 이상으로 비정상인 14명의 환자들 중 12명 (85%)에서 개선 소견을 보였으나 수술 전 DFI가 10 미만인 정상 환자 4명에서는 1명 (25%)만이 개선 소견을 보였다. 수술 후 정자의 밀도, 운동성, 생존성에서 호전 양상 보였으나 유의한 차이는 없었다.

Conclusion: 미세수술적 정계정맥류 절제수술을 통한 수술적 교정은 정액검사상의 다른 지표의 개선 뿐 아니라 정자 핵내 DNA 손상을 감소시킬 수 있다. 이상에서 정계정맥류의 수술적 교정으로 정자 핵내 DNA integrity의 개선을 기대할 수 있으며, 이는 보다 양호한 정자를 많이 얻을 수 있어 자연임신이나 보조생식술의 성공 가능성을 높일 수 있다는 것을 제시한다.

0-12(임상) Direct Ovarian Stimulation by Ovarian Injection of rFSH and Somatropin for the Poor Responders in IVF-ET Program

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Objectives: To access the effect of direct ovarian stimulation by ovarian injection of rFSH and somatropin (DOS) on oocyte recovery, embryo development and cycle outcome in the poor responders undergoing IVF-ET program.

Methods: One hundred forty-nine patients participated in this study. The patients were divided into 3 groups based on their prior response and application of DOS to the COH: Group 1 (control, mean age: 34.2±5.6): 98 patients with prior normal response, Group 2 (Non-DOS, mean age: 39.9±4.2): 23 patients with a prior poor response, to whom DOS did not be applied, and Group 3 (DOS, mean age: 40.7±3.4): 26 patients with a prior poor response, to whom DOS was applied. Patients with endometriosis, uterine pathology and PCOS were excluded. Ovarian stimulation for all patients was initiated with 150~225 IU of rFSH and 75 IU of hMG with the standard GnRH-a long-protocol. For DOS, 0.4 cc of culture media (Quin's Advanced Fertilization media, SAGE, USA) containing 30 IU of rFSH (Gonal-F[®], Merk Serono S.A., USA) and 0.2 IU of Somatropin (Decalge inj[®], LG Life Science, Korea) was injected on each ovarian stroma with 19 gauge needle (Chiba needle[®], Angiomed, Germany) on the cycle day 2 and additional injection on the cycle day 4 was decided after due consideration of an ovarian responsiveness.

Results: Number and quality of oocytes retrieved and their development of embryos in DOS group comparing to non-DOS poor responders, were significantly improved (No. of oocytes retrieved: 6.3±4.8 Vs. 1.6±0.9, good quality oocytes: 4.3±3.8 Vs. 1.1±0.5, no. of good quality embryos: 3.2±2.1 Vs. 0.42±0.1, cumulative embryo score: 93.6±70.1 Vs. 42.8±32.6, p<0.05, in Sheffe).

Conclusion: An alternative approach of DOS in addition to the standard GnRH-a long-protocol for the patients with prior poor response enhances the ovarian response, thereby improves the quality of transferred embryos and the clinical

outcome. This may be due to increase the concentration of FSH and somatropin in early follicular phase with concomitant augmentation of angiogenesis by estrogen in the treated ovaries.

0-13(기초) Clinical Efficacy of Frozen-Thawed Embryo Transfer in Women with Endocrinologically Manipulated Endometrium with GnRHa

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Objectives: To investigate the clinical outcomes after frozen-thawed embryo transfer in artificially manipulated endometrial cycle and compare the treatment efficacy with fresh embryo transfer cycle.

Methods: Each 54 women who underwent first frozen-thawed embryo transfer and fresh embryo transfer in which at least 2 good quality embryos were transferred were collected successively as study group (group 1) and control group (group 2). We evaluated and compared the clinical outcomes including clinical pregnancy rate, implantation rate, abortion rate, on-going pregnancy rate between 2 groups. Statistical analysis was performed with student t-test and Chi square analysis and $p < 0.05$ was considered as clinical significance.

Results: There were no significant difference in patient age, infertility duration, type, cause and quality of embryos transferred and baseline hormone profile except LH (6.78 ± 9.80 versus 3.98 ± 2.33 , higher in group 1, $p = 0.046$) between two groups. Clinical pregnancy rate, implantation rate, on-going pregnancy rate in group 1 and group 2 were 40.7% and 38.8%, 14.4% and 15.1%, 40.7% and 28.6%, respectively, there were no significant difference between 2 groups. Miscarriage rate in group 2 was 28.6%, significantly higher compared than 0% in group 1 ($p = 0.027$).

Conclusion: Clinical outcomes after frozen-thawed embryo transfer in artificially manipulated endometrium with GnRHa were comparable to those in fresh embryo transfer cycle, so this protocol may be able to be at least as effective as fresh embryo transfer technique.

0-14(기초) 미성숙난자의 형태학적 지표와 체외성숙능과의 관계

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Objectives: 미성숙난자의 체외성숙에 있어 난구세포의 양상 및 미성숙난자의 크기가 영향 인자로 작용하는지를 알아보려고 하였다.

Methods: 2007년 1월부터 9월까지 체외수정시술을 위한 과배란유도 후 난자채취를 시행한 환자 중 18명의 환자에서 미성숙난자를 얻을 수 있었는데 이들에서 얻어진 33개의 germinal vesicle (GV) 단계의 미성숙난자를 대상으로 연구를 진행하였다. 미성숙난자는 먼저 난구세포의 양상을 다층난구세포 (multi-layered cumulus)와 단층난구세포 (single layered cumulus)로 나누어 기록하고 hyaluronidase를 처리하여 일괄 denudation을 시행하였다.