

in patients with minimal to mild endometriosis because of significantly decreased fertilization rates.

0-15(임상) Transverse Vaginal Septum의 여성에서 Chiba Needle을 이용한 자궁내 정자주입에 의한 임신 성공

조정현 · 김유신 · 이동률 · 이숙환 · 윤태기

포천중문의과대학교 차병원 여성의학연구소

Background & Objectives: Transverse vaginal septum같은 질-자궁 입구의 기형으로 정상적 부부관계에 의한 임신이 불가능하게 보이는 여성에서 배란시기에 맞추어 Chiba needle과 같은 긴 바늘을 이용하여 자궁 근육층을 통과하여 자궁강내에 정자를 직접 주입하는 방법으로 임신이 가능한지 여부를 알아보려고 하였다.

Method: Transverse vaginal septum이 있고 PCO (FSH 6.5 mIU/ml, LH 13.3 mIU/ml, PRL 10.8 ng/ml, E2 48.5 pg/ml)를 보이는 31세의 여성 환자에게 clomiphene citrate 100 mg과 IVF-M 75 IU로 배란유도를 두 차례 시행 하였으며 배란시에 Chiba needle을 이용하여 자궁내에 정자를 직접 주입하였으나 임신에 실패하였다. 세 번째 배란유도도 같은 방법으로 시행하였으며 MCD#16일에 초음파상에 난포 3개가 배란이 일어났으며 1개의 난포는 보조 배란술을 시행하였으며 Chiba needle로 준비된 정자 (20×10^6 /ml, Motility 99%) 0.3 ml을 자궁내로 주입하였다.

Results: 자궁강내에 정자의 주입 후 3주 후에 임신을 확인하였으며 인공수정 후 5주째에 6개의 태낭을 확인 하였고 6개 중 5개의 태낭에서 심박동을 확인하였다. 임신 7주째 선택적 유산을 시행하여 2개의 건강한 태낭만을 보존하였다. 2006년 10월 26일 현재 임신 21주에 쌍태 임신을 유지하고 있다.

Conclusions: Transverse vaginal septum과 같은 질-자궁 입구 기형이 있을 때 Chiba needle을 이용하여 자궁 근육층을 통과하여 자궁강내로 정자를 주입하는 기술은 임신 시도에 좋은 대체 보조 생식술의 하나로 적용이 될 수 있다.

0-16(기초) Mitochondrial DNA Copy Number in the Patients of PCOS

Ji Eun Park, Min Hee Jang, Sung Won Cho, Yoo Shin Kim,
Hyung Jae Won, Jung Hyun Cho, Sook Hwan Lee

*Fertility Center of CHA General Hospital, CHA Research Institute, Pochon CHA University,
"Genome Research Center for Infertility and Reproductive Medicine" of Korea
Ministry of Health & Welfare, Seoul, Korea*

Background & Objectives: The polycystic ovary syndrome (PCOS) is a common and complex endocrine

disorder. It affects 5~10% of women of reproductive age. Significant number of PCOS patients show impaired glucose tolerance and are in potential risk of developing type 2 diabetes. Approximately half of women with PCOS are known to be obese or overweight. Obesity is associated with gonadotropin dynamics, hyperandrogenism, insulin resistance, and disorders of spontaneous ovulation. Mitochondria have the function to support the cell energy. PCOS may be associated with the number of mitochondrial DNA (mtDNA) copies. We analyzed quantification of the mtDNA to investigate the relationship of mitochondria supporting the cell energy and pathogenesis of PCOS.

Method: Peripheral blood samples were collected from 28 patients with PCOS, who were under the inclusion criteria for PCOS, and from 28 healthy controls. Each sample was quantified 10 µg/ml for PCR by nano drop. Genomic DNA was used to analyze real-time PCR for mitochondrial DNA quantification. The PCR reaction was performed in duplicate using the MJ Research Opticon 2. The mitochondrial copy number was compared between the control and PCOS groups. All data was expressed as mean ± SD. Statistical analysis was assessed by t-test.

Results: In this study, the mtDNA CT was 11.67 ± 0.422 in PCOS patients and 11.51 ± 0.722 in control group, respectively. The mtDNA copy number was $1726410.71 \pm 407858.591$ in PCOS patients and 2167887.5 ± 1252459.28 in control group ($p=0.08$), respectively. Using t-test, no significant difference between PCOS patients and control group was found.

Conclusions: We imply that mtDNA copy number affect the development of PCOS caused by abnormalities in the mitochondrial mechanism, such as impaired apoptosis, insulin-stimulated pathways, insulin resistance and anovulation. Our results show that mtDNA copy number reduced slightly on patients with PCOS, but not significant. Further studies are warranted to elucidate the roles of apoptosis and mitochondrial function in the pathogenesis of PCOS.

Supported by a grant of Korea Health 21 R&D Project, Ministry of Health & Welfare Republic of Korea (A010382).

0-17(기초) Expression of Nur77 Family Genes During Follicle Development in Rat Ovary

Moon Kyoung Cho¹, Yu Kyoung Lee¹, Mi Young Kim¹,
Sang Young Chun², Yu Il Lee¹

¹Department of Obstetrics and Gynecology, Medical School,

²Hormone Research Center, Chonnam National University

Background & Objectives: NGFI-B deficient mice have no phenotype, suggesting the possible existence of a protein with redundant function to NGFI-B. The present study was designed to determine the possibility that Nurr1 or Nor1 expression may perform a similar function to NGFI-B expression during ovulatory process in rat ovary.