

하였다. 사출된 원 정액 또는 세척용 배양액에 항산화제인 EDTA와 Catalase를 농도를 달리하여 첨가하고 각각 실온보관 및 세척 후 실온보관 1시간, 24시간 후에 CASA를 이용하여 이들 정자의 다양한 운동지수를 (Motility, VCL, VSL, VAP, ALH, BCF, HYP) 측정 비교하였다. 또한 첨가된 항산화제가 정자의 침체반응 유도 (Con A-FITC 염색) 및 DNA fragmentation 억제에 (comet assay 분석) 미치는 영향을 조사하였다.

**Results:** 원 정액에 항산화제를 첨가하였을 경우, 낮은 농도의 EDTA첨가군에서 전반적인 정자의 운동지수가 향상되는 결과를 나타내었으나 대조군과 유의한 차이는 없었다. 세척용 배양액에 항산화제를 첨가하여 세척하였을 경우, 1시간 후에 EDTA 10  $\mu$ M 첨가군이 대조군에 비해 유의하게 향상된 높은 정자의 운동지수를 ( $p>.05$ ) 나타내었으나 24시간 후에는 EDTA 보다는 Catalase 10U, 1U 첨가군에서 보다 높은 운동지수를 나타내었다. 반면 1 mM 고농도의 EDTA 첨가는 원 정액 및 세척된 정액 내 정자의 운동지수를 유의하게 감소시키는 ( $p>.05$ ) 결과를 나타내었다. 정자의 침체반응에는 EDTA 1 mM 첨가군과 Catalase 첨가군에서 유의하게 높은 침체반응을 나타내었다. 항산화제의 첨가는 DNA fragmentation rate를 유의하게 감소시키는 효과를 나타내었다.

**Conclusions:** 원 정액 보다는 세척한 정액의 운동지수가 전반적으로 향상되었고 적정농도의 항산화제 첨가는 정자의 운동지수의 향상에 효과적인 도움이 되었다. 또한 첨가된 항산화제는 침체반응을 향상시킬 뿐 아니라 활성화산소 (ROS)의 해로운 효과를 감소시켜 정자의 DNA fragmentation rate를 감소시켰다.

## 0-13(임상)                      Ovarian Response to Controlled Ovarian Hyperstimulation in Patients Treated with Cystectomy for Unilateral Ovarian Endometrioma

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**Background & Objectives:** To compare ovarian response to controlled ovarian hyperstimulation (COH) between ovaries previously treated surgically and contralateral ovaries in patients who had unilateral ovarian endometrioma.

**Method:** Seventeen patients with unilateral ovarian endometrioma previously treated surgically underwent 32 cycles of IVF. The number of dominant follicles ( $\geq 14$  mm) observed on the day of hCG administration and the number of eggs retrieved were compared between ovaries previously treated with cystectomy and contralateral ovaries.

**Results:** The number of dominant follicles from diseased ovaries previously treated with cystectomy was not significantly different from contralateral normal ovaries after controlled ovarian hyperstimulation

( $p=0.182$ ). Neither was the number of eggs that were retrieved from the diseased ovaries significantly different from contralateral normal ovaries ( $p=0.282$ ).

**Conclusions:** Endometrioma cystectomy does not appear to reduce the ovarian response to COH for IVF.

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## 0-14(임상) IVF Outcomes in Severe Endometriosis are Better than those in Mild Endometriosis

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**Background & Objectives:** To evaluate the impact of endometriosis on IVF-ET cycles and to compare IVF outcomes between stage I/II and stage III/IV endometriosis.

**Method:** We analyzed 697 patients (1199 cycles) with endometriosis (stage I-II: 638 cycles, stage III-IV: 561 cycles) and 325 pts (459 cycles) with tubal factor as controls between January 1994 and April 2004. Pts with endometriosis were diagnosed by laparoscopy and medical and surgical treatment were done in 353 cycles (55.3%) and 466 cycles (83.1%) of stage I-II/stage III-IV endometriosis. Cycles with age>35 years or FSH>20mIU/mL or severe male factor infertility were excluded.

**Results:** There was no significant difference in the mean age (years) in stage I-II /stage III-IV endometriosis and control ( $31.7\pm 2.3$  vs.  $31.4\pm 2.4$  vs.  $31.6\pm 2.7$ ). The number of retrieved oocytes ( $9.97\pm 7.2$  vs.  $13.4\pm 7.9$  ( $p<0.0001$ )), total number of embryos ( $6.5\pm 4.8$  vs.  $9.1\pm 5.6$  ( $p<0.0001$ )), and good quality embryos ( $2.43\pm 1.6$  vs.  $2.74\pm 1.7$  ( $p=0.013$ )) significantly decreased in stage III-IV endometriosis than in control. But pregnancy rate of stage III-IV endometriosis was comparable with control (35.7 % vs. 36.8 %). Fertilization rate and number of total embryos were lower in stage I-II endometriosis than in control ( $64.8\pm 22.9$  vs.  $70.8\pm 20.8$  ( $p<0.0001$ ),  $7.6\pm 5.0$  vs.  $9.1\pm 5.6$  ( $p<0.0001$ )). In patients with medical and surgical treatment of endometriosis, pregnancy rate and live birth rate was significantly lower in stage I-II than in stage III-IV endometriosis (29.2 vs. 36.2 (%),  $p=0.045$ , 23.9 vs. 31.5 (%),  $p=0.043$ ). There was no difference in the mean age, but the duration of infertility was significantly longer ( $56.5\pm 26.3$  vs.  $46.9\pm 25.8$  (mon),  $p<0.0001$ ) and fertilization rate was lower ( $64.7\pm 23.3$  vs.  $70.5\pm 22.7$  (%),  $p=0.001$ ) in stage I-II than stage III-IV endometriosis.

**Conclusions:** Pregnancy rate and live birth rate in treated patients with stage I-II endometriosis is significantly lower than stage III-IV endometriosis. That might be related to lower fertilization rate and longer duration of infertility in milder endometriosis. Pregnancy rate and live birth rate in stage III-IV endometriosis are comparable with tubal factor infertility. We suggest that IVF should be considered earlier