

- 1 -

**Is Poor Responders Bad or Difficult? : Pregnancy Rate and the Other Various Reproductive Characteristics of the Poor Responders in In Vitro Fertilization (IVF) Program**

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Retrospective chart review was performed to compare various reproductive characteristics including pregnancy rates between normal responders and poor responders in in vitro fertilization program. Patients registered at infertility Medical Center of The CHA General Hospital from January 1992 to December 1993 were reviewed. Four hundred seventy-five patients with tubal factor were included in this study. They were  $\leq 40$  years old and stimulated by FSH/hMG/hCG for the first IVF cycle. Patients were grouped by their plasma estradiol- $17\beta$ (E2) level at the time of hCG injection; normal responder with over 700 pg/ml E2 (n = 409) and poor responders with under 600pg/ml E2 (n=66). Age, duration of infertility, plasma E2 level at the time of hCG injection, length of folliculogenesis, number of oocytes retrieved, number of mature oocytes in retrieved one, number of oocytes fertilized, number of embryos developed, number of embryos transferred, and rate of clinical pregnancy were evaluated. Mean age of poor responders was older than that of normal responders, but the duration of infertility was not

significantly different between two groups. More oocytes were retrieved and consequently more embryos were transferred in normal responders. Rates of fertilization and development of the retrieved oocytes in vitro were similar in two groups. Even though the number of oocytes retrieved were smaller and consequently smaller number of embryos was transferred in poor responders, oocytes retrieved from poor responders had the similar capability to fertilize and develop in vitro compared to oocytes of normal responders. Clinical pregnancy rates per cycle were 24.4% and 24.2% in normal and poor responders, respectively. The incidence of cycles with no embryo transfer was higher in poor responders. Therefore, results from the present study suggest that: 1) level of E2 in follicular phase may not have the crucial effect in determining the fertilizability of oocytes, quality of embryos after the fertilization, and uterine receptivity, and 2) poor responders who had embryos transferred may have the same possibilities to be pregnant compared to normal responders.

- 2 -

**Cotreatment with Growth Hormone in Superovulation Induction for IVF in Women with Limited Ovarian Reserve**

고려의대 산부인과

장기훈 · 김선행 · 구병삼

성장호르몬(GH)이 IGF-1의 생산을 증가시키고, IGF-1이 in vitro에서 FSH에 대한 과립막세포의 반응을 자극한다는 보고가 있는 후, 체외수정시술(IVF)을 위한 과배란유도시에 gonadotropin과 함께 GH를 사용함으로써 난