Management of poor responders in IVF

Dear Sir,

We read with interest the recent paper (Moreno et al., 1998), the idea of which is a valid contribution to the literature on the management of poor/low responders in in-vitro fertilization (IVF). Employing intracytoplasmic sperm injection (ICSI) to improve the fertilization rate in this group of patients echoes the intuition of many clinicians. However, we would like to raise several points of concern that weaken the conclusion drawn by the authors.

The authors failed to report on the method by which patients were allocated to IVF or ICSI and its timing in relation to the start of ovarian stimulation and oocyte recovery. Therefore, inadvertent bias or contamination of the study samples could not be excluded. Although the authors compared two groups of 52 cycles, they did not report on the number of patients in each group. Nevertheless, they went on to compare the ‘number of oocytes and embryos per patient’ and ‘pregnancy rate per cycle’ between the two groups in their study, which is rather confusing and misleading. Early follicular phase follicle stimulating hormone (FSH) concentrations should also be given to show that the groups would be expected to exhibit a similar response.

Pregnancy rate is the ultimate proof of the efficacy of any modality of assisted reproduction. The pregnancy rate per cycle in the ICSI group was 4% higher than the IVF group. Simple mathematical computation will show that ~2250 patients are required in each group to achieve a power of 90% in detecting a significant difference at 0.05 significance level. The sample size used by Moreno et al. will achieve a statistical power of <5%, i.e. β (type II error) of >0.95. Therefore, there is a chance of ≥95% of falsely accepting the null hypothesis.

The authors did not report on the distribution of the cause of infertility, the number of previous IVF attempts and duration of infertility in the two study groups which have been shown to influence the pregnancy rate in IVF patients (Templeton, 1998). The authors administered eight ampoules of gonadotrophin (600 IU of FSH) to the patients who had previous cancelled cycles (34.6 and 38.5% in each group) despite the lack of supporting evidence. We have reported that exceeding a gonadotrophin dose of 300 IU of FSH is futile (Lashen et al., 1998), besides such a high dose may be associated with lower pregnancy rates in IVF (Stadtmour et al., 1994).

In view of all these points it is difficult to accept the authors’ conclusion as solid proof. Nevertheless, their effort in addressing the role of ICSI in the management of poor/low responders is very much appreciated and could be useful as a pilot study.

References


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