How to Present ART Results: Do We Need a Gold Standard?

Putting your best possible results up for inspection, or medical bragging, is an understandable human failing. It has already been observed that in vitro fertilization (IVF) conferences show only results from units with >30% pregnancy rates (1). Another more admirable technique (but equally misleading) is to report a short series in which some clinical change has taken place, with an improvement in results that the author understandably wishes to convey to the journals.

It can easily be demonstrated that results can be biased by the patients selected and the treatments themselves, and even the definition of an IVF "success" is subject to interpretation (2).

It may be argued that medical societies need to monitor the quality of IVF programs with which they are associated. In Australia and New Zealand reports have been published on an annual basis by the National Perinatal Statistics Unit, the most recent covering fertilizations for 1996 (3). These reports, published by an independent authority, have reassured the community that there is an overview mechanism and has avoided any pressure for details in the form of result-based "league tables" as in the United Kingdom. Government has been confident enough to subsidize treatments without the need for an expensive over-viewing government bureaucracy. In this system "success" is published by the individual units using an anonymous code such as "live-birth rates/100 cycles reaching oocyte pickup." It does overcome the demand of individuals to know success rates (4), at the same time encouraging honest reporting.

There are still major problems with this. Australia has a unique system of government funding a maximum of six hyperstimulation IVF cycles, but no limit to the number of cycles that are canceled before day 10 of stimulation. This encourages cancellation if a small number of oocytes is suitable for collection during that cycle due to poor follicular recruitment. The current data do not allow for the pregnancy contribution from frozen embryo transfers from oocytes at the original pickup. There is no common policy on oocyte selection for fresh compared with frozen transfer. Should the patient become preg-

nant with fresh embryos, a subsequent frozen embryo pregnancy may be delayed (or even destroyed) and recorded only after many years.

In addition, Australia and New Zealand Units have endorsed a code of practice encouraging a two embryo transfer policy (occasionally three embryos are transferred in older women, e.g., over 38 years of age, who have repeatedly failed and are approaching the six-cycle limit). Repeat transfers of frozen embryos are encouraged.

It is not surprising therefore that the international figures show Australia (one of the first societies to embrace IVF technology) to be well below average when success rates are quoted (5) using nonuniform data. In this report Australia has a live-birth delivery rate of 11.5% per oocyte pickup (while the mean average of 31 countries is 14.7%).

Frequently the media comes upon "medical breakthroughs," e.g., increased pregnancy rates with 5-day culture to blastocyst. The figures taken in isolation are made known to patients and require considerable time and explanation. A further difficulty is that publication on the Internet is also being used increasingly for promotion, again without definitions or controls.

My suggestion, therefore, is that the international assisted reproduction technology (ART) community needs a reliable "gold standard" success rate that could not be distorted and would be able to invite comparison and allow interpretation of medical advances.

The criteria for the idealized couple would be as follows.

- Female <35 years, with bilateral tubal occlusion and regular menstrual cycles
- No previous pregnancy in the couple
- Normal serum FSH in female
- Normal-sperm count in male
- Only the first two cycles reaching oocyte pickup (without the first cycle resulting in a pregnancy)
- Frozen embryo pregnancy additions to be included (with a 5-year limit)
- Implantation rate (rather than pregnancy rate) defined as "number of positive hearts or fetal

sacs seen on ultrasound per embryo transferred," expressed as a percentage (6). We put this standard forward and invite comments. Of course, small IVF units would not have enough "ideal" patients falling within these limited confines to reach a level of clinical significance, but it might be feasible internationally. Until something better is proposed, we believe that the current concentration on publishing identifiable success rates and breakthroughs is not in the interests of patients and that editors of scientific journals should work to encourage honest comparison.

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