Strict IVF Restrictions Could Lower Success Rates

BY KATE JOHNSON Montreal Bureau

NEW ORLEANS — Mandated restrictions on in vitro fertilization practices, such as those in place in parts of Europe, would have a negative impact on success rates in the United States, according to fertility experts at Cornell University, New York.

However, flexible restrictions in selected, good-prognosis patients could have a positive impact, they said during a press conference at the annual meeting of the American Society for Reproductive Medicine.

'We are worried that although policies and protocols limiting the number of embryos transferred are undoubtedly a good idea, nonselective regulations may harm pregnancy rates," Dr. Peter Klatsky said in an interview.

"It's the wrong way to try to reduce multiple gestations," said Marco Toschi, M.S.

The researchers outlined their separate studies, which simulated the impact of European-type restrictions on their patient populations. "We wanted to underline the possible threat of similar legislation here," said Mr. Toschi, who previously worked in Italy, where some of the tightest restrictions have dramatically reduced pregnancy rates.

Mr. Toschi calculated the impact Italy's restrictions would have had if they had been applied on 12,301 cycles of intracytoplasmic sperm injection (ICSI) performed at Cornell. Italian law forbids the fertilization of more than three oocytes

and requires the transfer of all resulting embryos—embryo freezing is not allowed. He compared the results of 785 patients who had only three oocytes available for insemination with the results of a group of 11,233 patients who had more than three oocytes inseminated as well as 283 patients who had only one oocyte available for insemination.

As expected, a restrictive oocyte insemination policy did result in fewer multiple gestations. However, it also resulted in a significantly reduced overall pregnancy rate, reported Mr. Toschi. Patients with the most oocytes inseminated had the highest rate of multiple gestations (33% twins, 4% triplets, 0.8% quadruplets), compared with patients who had only three oocytes inseminated (20% twins and no higher-order multiples) and patients who had only one oocyte inseminated (no multiple gestations).

Pregnancy success rates followed a similar pattern with a 40% delivery rate for the group with the most oocytes inseminated, a 19% rate for the group with three oocytes inseminated, and a 6% rate for those with one oocyte inseminated, he reported. Adjustment for male-factor infertility and maternal age did not alter the findings, but he acknowledged that the biggest limitation of the study was the fact that women who received fewer embryos did so because they had not produced more and were therefore classified as poor responders to IVF therapy. Similar restrictions imposed in a population of good responders may have resulted in higher pregnancy rates.

In a separate study, Dr. Klatsky reviewed 11,237 ICSI cycles performed at Cornell and estimated the impact of a different restrictive policy, that of single-embryo transfer (SET), which is mandated in certain Scandinavian countries. He found that if SET had been performed in his study population classified as "good responders' (patients with at least two extra cleavagestage embryos) it would have resulted in an average delivery rate of 36% in women under age 38 years, and an average rate of 22% in those aged 38-42.

The results show that SET is "a reasonable option with potentially high pregnancy rates" in good responders, said Dr. Klatsky, noting that 40% of his study population had previously failed two cycles of ICSI. "But we want to be clear that there are women who are poor responders and will not do well. Physicians need to take seriously the risks associated with transferring multiple embryos; however, in order to help the most patients possible and to individualize care, we need the flexibility to put back more embryos in specific individuals whose prognosis is not as promising."

To that end, he also calculated the impact of transferring two embryos instead of one in his study population. He found this would result in no increase in the singleton pregnancy rate but a substantial increase in twin pregnancies (from 0 to 26%). And when examining the impact of transferring three embryos instead of two in the same population, he found minimal increases in the singleton and twin pregnancy rate but a significant increase in higher-order multiple gestations (from 1% to 6%).

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