Fertility Preservation: Ca Patients Not Always Told

BY PATRICE WENDLING

VITALS

Major Finding: Many oncologists are not likely to mention fertility preservation to cancer patients who have a poor prognosis, contrary to guidelines.

Data Source: A national 53-item survey of 513 U.S. oncologists.

Disclosures: The study was sponsored by the American Cancer Society. Dr. Quinn and her associates stated that they have no conflicts of interest.

ATLANTA — Physicians' attitudes may conflict with recommended guidelines for fertility preservation and reduce the likelihood that cancer patients will receive information about this reproductive option.

That conclusion was drawn from a national 53-item survey of 513 U.S. oncologists, specifically examining physicians' attitudes toward fertility preservation referral among cancer patients with a poor prognosis.

Sixty percent of respondents agreed with the statement that "fertility preservation is a high priority for me to discuss with newly diagnosed cancer patients," while 26% were unsure and 14% disagreed, Gwendolyn Quinn, Ph.D., and her associates reported in a poster at the annual meeting of the American Society for Reproductive Medicine.

Overall, 68% of oncologists agreed that "some patients with certain cancers, e.g., hereditary breast and ovarian cancer, should be informed about preimplantation genetic diagnosis," also known as embryo screening, the investigators said.

When these oncologists were asked, however, if they support posthumous parenting, or the parenting of a child born from assisted reproduction subsequent to the patient's death, only 16.2% agreed, 51.5% were unsure, and 32.3% disagreed.

The statement, "Patients with a poor prognosis should not pursue fertility preservation," evoked similar responses, with 45% of oncologists being unsure, 23% agreeing, and 32% disagreeing.

In a logistic regression analysis, only support of posthumous reproduction was a significant predictor of support for fertility preservation in patients with a poor prognosis, wrote Dr. Quinn of the H. Lee Moffitt Cancer Center and Research Institute, Tampa, and her associates.

Guidelines by the American Society for Reproductive Medicine recommend that physicians inform cancer patients about options for fertility preservation and future reproduction prior to treatment, and that "concerns about the welfare of resulting offspring should not be cause for denying cancer patients assistance in reproducing."

Fertility, as an issue of quality survivorship, is also part of the agenda of most national advocacy groups, including the American Cancer Society, the Lance Armstrong Foundation, and the Young Survivors Coalition.

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DR. QUINN

Many physicians assume a patient with late-stage disease or a poor prognosis is not a candidate for fertility preservation, Dr. Quinn said in an interview.

"There are multiple cases of couples/families using stored sperm or embryos to expand families after the death of the loved one," she said.

"However, people may not go public with this because it can be perceived as 'strange' or odd. As a consequence, physicians may not be aware of what patients and families are doing," she said.

The bottom line, however, is that all of the national guidelines that address fertility preservation specify that "all" patients should receive information on the matter. "It is not for the physician to pick and choose who gets the information," Dr. Quinn said.

The majority of respondents were male (70%), white (76%), and Catholic (30%) and had children (85%). Most physicians had graduated from medical school in 1991 or earlier, and practiced primarily at a teaching hospital, university-affiliated cancer center, National Cancer Institute–designated center, or location other than a private oncology practice.

Dr. Quinn said that national guidelines are a slow and ineffective way to create behavior change, noting that the American Society of Clinical Oncology and American Academy of Pediatrics also have existing recommendations on fertility preservation.

One aspect of awareness raising that seems to work well is testimonials by patients about why fertility preservation is important to them, the regret and remorse they feel when they did not receive it, and the types of family-building options patients have pursued, she said. ■

Could Embryo Morphology Redefine IVF Clinic Outcomes?

BY PATRICE WENDLING

ATLANTA — A new embryo morphology grading system could revolutionize the way in which patients and physicians compare infertility clinics, investigators reported.

Until now, data from national reporting of in vitro fertilization (IVF) success rates have been used to compare clinics. However, that data can be imprecise, because the severity of patient infertility varies between IVF clinics. Centers that are required to accept all comers inherently have lower success rates than those that can cherry-pick their clientele.

In 2004, several clinics approached the Society for Assisted Reproductive Technology (SART) to consider having clinics report morphologic grades for their embryos, because embryo quality is thought to reflect fertility potential. Some clinics have been collecting these data, but the quality measurements differed between laboratories.

SART developed its own system that grades embryos according to visual characteristics into one of three categories: good, fair, or poor. The society also introduced the morphologic characteristics of cellular symmetry and percentage fragmentation as potential hallmarks of embryonic well-being.

From June 2006 to January 2008, SART asked clinics to voluntarily report their morphology data. Those data have been obtained for 70,293 embryos from 28,186 transfers, representing 19% of all the fresh autologous embryo transfers reported to SART's Clinical Outcomes Reporting System in 2006 and in 32% of all transfers in 2007.

Analyses showed significant differences between good, fair, and poor embryos and live birth rates. Furthermore, the relationship between live births and embryo grade was negatively correlated with increasing maternal age, according to Michael Vernon, Ph.D., who helped develop the system with seven other embryologists led by Catherine Racowsky, Ph.D.

Embryo transfers were performed from 1 to more than 7 days post insemination, with 62% of transfers performed on day 3 and 29% on day 5. The majority of embryos transferred were classified as good on day 3 (70%) and day 5 (78%). Few fair and even fewer poor embryos were transferred on day 3 (24% and 5.5%, respectively) and day 5 (18.6% and 3.6%).

Among women who received two embryos of the same grade, the live birth rate for good embryos was 45% on day 3 and 56% on day 5, compared with 35% and 42% for fair embryos, and just 21% and 30% for poor embryos, Dr. Vernon, chair and professor of obstetrics and gynecology, West Virginia University in Morgantown, and his associates reported in a poster at the annual meeting of the American Society for Reproductive Medicine (ASRM).

The data are so encouraging that SART is considering mandating that clinics report their embryo morphology information. If that mandate does come to be, clinics will have critical information to aid their quality control and quality assurance activities.

In the current data set, more than 670 embryo transfers contained more than 6 embryos, which is not within SART guidelines of acceptability. In some cases, more than 10 embryos were transferred. In all, 48% of labs transferred only one to two embryos on day 3, and 79% did so on day 5.

That falls within the recently revised SART/ASRM embryo transfer guidelines recommending that only one more embryo be transferred than called for in four age-based prognostic categories.

Related data reported at the same meeting by Dr. Racowsky associate professor of obstetrics and gynecology at Brigham and Women's Hospital, Boston, showed a strong positive correlation for cellular symmetry and percentage fragmentation.

The analysis she presented showed that live birth rate increased from from 2.9% for embryos with less than six cells on day 3, to 24.3% for those with eight cells, but decreased to 16.2% for those with with more than eight cells. The live birth rate decreased from 23% for embryos with perfect symmetry to 11.3% with moderate asymmetry and 4.5% for severe asymmetry. The live birth rate was 21% for embryos with no fragmentation, 11% for those with 10%-25% fragmentation, and just 2.5% for those with greater than 25% fragmentation.

The regression equation derived from this analysis revealed that with a cut-off of 0.3, 76.4% of embryos were classified correctly as either not resulting in a live birth, or giving rise to a live birth.

The authors noted that future analysis of a larger SART data set could increase the accuracy of the morphologic classification system and lead to a Web-based regression equation enabling ranking of embryo viability.

Such an equation would enhance the selection of fewer embryos at embryo transfer and reduce the potential for multiple births.

Moreover, standardization of a national embryo morphology system should assist clinics with quality control and quality assurance activities, thereby improving overall care of infertility patients. ■

Disclosures: *Dr. Racowsky disclosed having served as an adviser to Medicult/Humagen/MidAtlantic Diagnostics and EMD Serono, and as a consultant for Schering-Plough. Dr. Vernon said that he had no disclosures. Data were collected by SART in accordance with requirements for reporting of assisted reproductive technology data to the Centers for Disease Control and Prevention.*

Pages 34a—34d