

Long-Term Freezing Doesn't Harm Embryos

In one case, twins resulted from an embryo stored 11.8 years by a donor aged 38 years at storage time.

ARTICLES BY
BETSY BATES
Los Angeles Bureau

INDIAN WELLS, CALIF. — Successful pregnancies and deliveries have resulted from donated embryos that had been frozen for more than 10 years, raising questions about arbitrary deadlines for unused embryos to be destroyed.

Researchers at the Cooper Center for In-Vitro Fertilization in Marlton, N.J., studied the viability of frozen embryos anonymously donated to infertile couples to see whether long-term freezing had an impact on their quality or survival.

Results were presented in poster at the annual meeting of the Pacific Coast Reproductive Society. (See chart.)

"There did not appear to be any decrease in pregnancy or implantation rates with longer storage duration. In contrast, there seemed to be a trend for the older embryos

to do slightly better, with a higher pregnancy rate and lower spontaneous abortion rate, although this was not significant," noted Dr. Jerome H. Check, medical director of the center, and his associates.

In two cases, live births resulted from embryos that had been frozen for more than 10 years.

A twin pregnancy resulted from an embryo stored 11.8 years by a donor who was aged 38 years at the time of storage. A total of six embryos were available for transfer and all survived thawing. Among the three transferred embryos, all reached the eight-cell stage and were of good quality. The recipient was delivered of a healthy boy and girl at full term.

A second live birth resulted from an embryo stored for 10.8 years by a 27-year-old donor. Three of four embryos available for thawing survived and two were transferred. Both had

good morphology and had reached the eight- and nine-cell stage, respectively, at the time of transfer. A pregnancy resulted in the birth of a healthy, full-term boy.

A literature search revealed that the longest time a multicell embryo has been frozen and then resulted in a delivery was 12 years, but an increasing number of reports suggests that healthy babies can result from embryos frozen indefinitely.

"These data are important, since legislation in some countries allows or requires embryos to be destroyed after 2-5 years of storage," the poster noted.

"Unequivocally, cryopreserved embryos can produce viable pregnancies and deliv-

eries far beyond this arbitrary cutoff time. When considered in combination with a voluntary embryo donation program, it seems wise to allow [in vitro fertilization] couples the option of cryopreserving supernumerary embryos and donating them when no longer needed," no matter how long the time period, the authors said.

The Cooper center is part of Cooper University Hospital, where Dr. Check serves as professor of obstetrics and gynecology and director of reproductive endocrinology. It is the teaching hospital for the University of Medicine and Dentistry of New Jersey/Robert Wood Johnson Medical School-Camden. ■

Cryopreservation Duration and Pregnancy Rates

| Years cryopreserved | ≤1.9 | 2-3.9 | 4-5.9 | 6-7.9 | 8-9.9 | ≥10 |
|---|------|-------|-------|-------|-------|------|
| Number of transfers | 32 | 54 | 50 | 23 | 20 | 3 |
| Percentage with ongoing pregnancy/delivered | 28.1 | 35.2 | 36.0 | 60.9 | 30.0 | 66.7 |

Source: Dr. Check

ELSEVIER GLOBAL MEDICAL NEWS

Survey Elicits Couples' Views On Donating Unused Embryos

INDIAN WELLS, CALIF. — Just over half of the couples donating unused embryos from in vitro fertilization procedures consider the embryos to be "completely different from children."

Indeed, many say they view the process as similar to donating blood or organs, according to a survey done by researchers at the University of Wisconsin at Madison.

Julianne E. Zweifel, Ph.D., and her associates decided to explore the attitudes of couples donating embryos for stem cell research when routine telephone calls during the process became lengthy discussions, suggesting to the team that these couples may have had unresolved feelings and questions.

"Phone calls that should [have lasted] about 5 minutes were lasting 20 or 30 minutes. They wanted to talk through these issues," Dr. Zweifel said during a presentation of her results at the annual meeting of the Pacific Coast Reproductive Society.

A subset of 45 couples consented to answer questions about the embryo donation process. The embryos had been created, in about one in five couples, with donor gametes.

Couples' embryos had been cryopreserved for a mean 4.8 years, with a wide range of 1-13 years, possibly representing the difficulty some couples had in making a decision about what to do, said Dr. Zweifel of the department of obstetrics and gynecology at the University of Wisconsin, Madison.

The respondents said they were donating embryos to research to help others (21 couples), in hopes of finding a cure for a specific disease (8 couples), to support research in general (7 couples), because they did not want to waste the embryos (7 couples), or for other reasons (2 couples).

The couples were asked to rate, on a three-point Likert scale, how closely they agreed that they viewed their embryos as children.

More than half (23 of 45) said they considered the embryos completely different from children, while 19 said they were something like children, and 3 said they viewed them as children. Many couples (20 of 45) said they thought embryo donation was roughly akin to donating blood or organs.

When asked why they did not decide to donate their embryos to another infertile couple, most couples said they were uncomfortable with the idea of having an unknown genetic/biologic child or with knowing that someone else would raise the child.

Importantly, many couples had been given misinformation about their ability to donate their embryos for stem cell research prior to contacting the Wisconsin program. Many were told, inaccurately, that they did not have enough embryos to donate, that the embryos had been inadequately screened for sexually transmitted diseases, or that donation simply was not an option.

Although only 2 of the couples had sought counseling about the decision, 44 of 45 couples said they found the additional discussion with the University of Wisconsin health care professionals to be helpful.

Dr. Zweifel said there is a need for guidelines on how to assist couples in their decision regarding unused embryos so that they get accurate information about the choices they have as well as the necessary psychological counseling and support.

She also raised the question of whether the sources of third-party gametes should be consulted at the time of donation as to disposition of any unused embryos that might result. ■

Methotrexate May Cut Oocyte Yield After Ectopic Pregnancy

INDIAN WELLS, CALIF. — Methotrexate is a safe and effective alternative to surgery for ectopic pregnancy; however, it may temporarily interfere with the success of fertility treatment, Dr. Janet McLaren reported at the annual meeting of the Pacific Coast Reproductive Society.

Significantly fewer oocytes were retrieved in cycles within 180 days of methotrexate-treated ectopic pregnancy, compared with cycles attempted beyond 180 days, in a study of 35 patients.

With patients serving as their own controls, the mean number of oocytes obtained in cycles in the first 6 months following methotrexate treatment of ectopic pregnancy was 7.8, compared to 10 during cycles performed before they received methotrexate.

Beyond 6 months, there was no reduction in the number of oocytes retrieved per cycle.

A slight decrease in endometrial thickness was also noted in the first 180 days following exposure to methotrexate, which targets rapidly dividing cells.

A total of 48 patients underwent fertility treatment following exposure to methotrexate in the chart review performed by Dr. McLaren and associates at Brigham and Women's Hospital and Harvard Medical School, both in Boston, and Stanford (Calif.) University Medical Center.

(Not all women underwent similar infertility procedures before and after methotrexate administration, and some lacked comparable pre- and post-methotrexate data, so not all subjects were included in the oocyte and en-

dometrial thickness comparisons.)

Among the entire cohort of 48 patients, 18 (37.5%) achieved an intrauterine pregnancy within a year, and 5 more women became pregnant with assisted reproductive technologies more than a year following methotrexate exposure, for a total overall pregnancy rate of 48%. Four of 48 women (8.3%) experienced a recurrent ectopic pregnancy. The mean time to conceive after methotrexate administration was 246 days.

Dr. McLaren concluded that her small study suggests there is a "time-limited effect on oocyte yield."

"If this is confirmed in larger series, it may be advisable to defer fertility treatment for 6 months after methotrexate administration," Dr. McLaren commented.

Of course, delaying reinitiation of fertility treatment would be less appealing to women who have an ectopic pregnancy at 39 than to women who have one at age 32, she noted.

Asked by an audience member whether fertility patients should undergo surgical treatment of ectopic pregnancy to avoid methotrexate exposure, Dr. McLaren replied, "The decision to do surgery versus methotrexate is so individual for each patient: what her operative risk is, and how anxious they are to get it over with. I have to say it's a case-by-case basis."

She noted that only five fertility patients underwent surgery rather than medical treatment of ectopic pregnancy in the Brigham and Women's Hospital program over a 6-year period. ■