

Associate Press News

Lab helps create babies to save their siblings

By Lindsey Tanner, May 4, 2004

CHICAGO (AP) — In a growing practice that troubles some ethicists, a Chicago laboratory helped create five healthy babies so that they could serve as stem cell donors for their ailing brothers and sisters.



AP Photo / M. Spencer Green

Dr. Anver Kuliev speaks with reporters at the Reproductive Genetics Institute in Chicago about the creation of five healthy babies at the laboratory who could possibly serve as stem cell donors for their ailing siblings. Made-to-order babies from different families were screened and selected when they were still embryos to make sure they would be compatible donors. Looking on are researchers Svetlana Rechitsky, center, and Yury Verlinsky.

The made-to-order infants, from different families, were screened and selected when they were still embryos to make sure they would be compatible donors. Their siblings suffered from leukemia or a rare and potentially lethal anemia.

This is the first time embryo tissue typing has been done for common disorders like leukemia that are not inherited, and the results suggest that many more children than previously thought could benefit from the technology, said Dr. Anver Kuliev, director of Chicago's Reproductive Genetics Institute, who participated in the research.

"This technology has wide implications in medical practice," Kuliev said in early May at a news conference.

The Chicago doctors said the healthy embryos that were not matches were frozen for potential future use. But some ethicists said such perfectly healthy embryos could end up being discarded.

"This was a search-and-destroy mission," said Richard Doerflinger of the U.S. Conference of

Catholic Bishops. The chosen embryos "were allowed to be born so they could donate tissue to benefit someone else."

Valparaiso University professor Gilbert Meilaender, a member of the President's Council on Bioethics, called the practice "morally troubling."

The council recently called for increased scrutiny of the largely unregulated U.S. infertility industry.

The cases involved prenatal tests called pre-implantation HLA testing, pioneered at Chicago's Reproductive Genetics Institute.

The tests are an offshoot of pre-implantation genetic diagnosis, which has been done for more than 1,000 couples worldwide to weed out test-tube embryos with genetic diseases such as Down Syndrome or, more recently, for sex selection.

The institute's doctors made headlines four years ago after performing embryo tissue typing plus genetic disease screening for a Colorado couple who wanted to create another baby to save their daughter who had a rare inherited disease called Fanconi anemia. The resulting baby boy, Adam Nash, donated bone marrow in an operation doctors said was a success.

Since then, embryo tissue typing with genetic disease testing has been performed more than three dozen times worldwide, with most of the cases done at the Chicago institute, Kuliev said.

Kuliev said the latest cases are the first instances in which embryos were tissue typed but not

screened genetically for diseases.

The cases, reported in the *Journal of the American Medical Association*, involved nine couples who submitted embryos that underwent tissue-typing tests during 2002 and 2003. Five had infants who were considered suitable donors.

So far, stem cells from the umbilical cord blood of one infant have been donated to an ailing sibling, Kuliev said. He called the operation a success but said the older child will need continued monitoring to be sure.

Another baby was born last June to an English couple who traveled to Chicago after British fertility authorities denied them permission to undergo the procedure in England, said Dr. Mohammed Taranissi, who co-authored the *JAMA* report. The couple's older child has Diamond-Blackfan anemia, a rare blood ailment that can lead to leukemia. Taranissi said a transplant from the baby boy's umbilical cord blood is scheduled soon.

Kuliev said the institute has done embryo testing alone for more than a dozen other couples, and demand is growing.

More than 13,000 U.S. residents are diagnosed yearly with one of the leukemias involved in the research — acute myeloid leukemia and acute lymphoid leukemia, the most common childhood leukemia.

Taranissi disagreed with ethicists concerned about discarding disease-free embryos. He noted that it often happens with in vitro fertilization, when doctors frequently create more test-tube embryos than are needed.

With tissue typing embryos, "you're doing this as a lifesaving procedure most of the time," Taranissi said.

For years, families with sick children have conceived babies without costly test-tube procedures, taking a one-in-four chance that the child will be a match for the ailing sibling, said University of Wisconsin medical ethicist Norman Fost, who wrote a *JAMA* editorial.

Some have had abortions when standard prenatal testing showed the child would not be a suitable donor, he said.

The new procedure, he noted, does not involve abortion and poses no known risks to the embryos. Furthermore, parents seeking donor babies typically are well-intentioned and love the donor children, Fost said.

"Of all the reasons people have babies, this would seem to be a wonderful reason. Most reasons are either mindless sex or selfish reasons," he said.