SFGate.com

Study: Sibling umbilical blood transplant cures sickle-cell kids

Elizabeth Fernandez, Chronicle Staff Writer
Friday, September 21, 2007

Children with sickle cell disease were cured following umbilical cord blood transplants from their siblings, according to findings reported Thursday in Washington, D.C., by doctors from Children's Hospital Oakland.

Of 43 youths across the country who received transplants from compatible siblings, 90 percent were cured, said blood specialist Dr. Bertram Lubin, senior vice president of research at Children's Hospital.

The children in the study ranged in age from 2 to 15. They suffered from either sickle cell disease or thalassemia. About 1,000 babies are born annually in the United States with sickle cell, an inherited disorder affecting red blood cells. Thalassemia, a hemoglobin abnormality, causes anemia that can range from mild to severe. According to estimates, about 1,000 people in the United States have the condition.

"It's a remarkable thing being able to cure a genetic disease," said Lubin. "These kids have a new life."

The results were reported at the 35th annual convention held by the Sickle Cell Disease Association of America and the National Institutes of Health.

One of the youngsters in the study was Matthew Damm, who was born with thalassemia and needed a transfusion every few weeks starting when he was 6 weeks old. He also had a needle planted in his stomach nearly every night to draw excess iron from his body.

Two years ago, he underwent a transplant of stem cells from the umbilical cord of his baby sister, Hannah. He is now an energetic 7-year-old who occasionally tussles with his little sister but mostly is grateful to be healthy.

"He's cured! He's doing wonderfully," said Matthew's mother, Dawn, who moved her family from San Diego to the Bay Area during the months that her son was being treated at Children's Hospital Oakland. "He doesn't talk much about it. But this summer, he told his grandfather: 'Grandpa, do you know that Hannah saved my life?' "

Matthew, like the other children, was treated through the hospital's sibling donor cord blood program, the nation's first and largest that exclusively banks newborn cord blood for a sick sibling.

According to sickle-cell specialist Dr. Yutaka Niihara, a UCLA professor and researcher with the Los Angeles Biomedical Research Institute, stem cell transplants started about 15 years ago. One

limitation, he said, is the difficulty in finding donors - about half of siblings also have sickle cell disease, making them ineligible as donors, and only 1 out of 4 siblings is found to be a tissue match.

"There's only a 12.5 percent chance with siblings that a transplant can be done," he said.

The typical life span of people with sickle cell disease is 43 years for men and 48 years for women, he said.

"This is a very difficult disease," he said. "If (the treatment) succeeds, the patient can enjoy a normal life span."

E-mail Elizabeth Fernandez at efernandez@sfchronicle.com.

http://sfgate.com/cgi-bin/article.cgi?f=/c/a/2007/09/21/BANRS9GP1.DTL

This article appeared on page **B - 12** of the San Francisco Chronicle