
MOOKIE'S LAST CHANCE

Shorty circled her arms around little Mookie and hummed sweet songs. Mookie was as placid as a one-year old could be with a tube running into his chest and a doctor and nurses hovering nearby. There was little more anyone could do now but hope that the wine-hued blood dripping into Mookie would save him from a rare, and usually fatal, bone disorder.

Mookie and his mom, who calls herself Shorty, came from Arkansas to be part of a novel therapy designed at Duke and now used at select hospitals around the country. The therapy offers hope to dozens of infants and children who need a bone marrow transplant, a last-ditch procedure used to treat a variety of fatal diseases, from leukemia and other cancers to inherited metabolic disorders. What these children don't have is a matched bone marrow donor, someone whose blood is genetically compatible so their bodies won't reject the bone marrow.

Dr. Joanne Kurtzberg began a bold experiment at Duke to identify a substitute for donor bone marrow. She suspected that blood from umbilical cords and placentas, the refuse of childbirth, would be rich in the fledgling stem cells that confer immunity and reconstitute diseased or damaged bone marrow. Because stem cells are less mature than adult bone marrow cells, Kurtzberg reasoned they could adapt more readily to a human's genetic blueprint.

The results to date show her hunch was right. Working with researchers at the New York Blood Center, which stores placental blood, Kurtzberg reported in the *New England Journal of Medicine* in July that placental blood can be successfully used in place of adult bone marrow for pediatric bone marrow transplants.

Kurtzberg has performed 54 of the world's 180 such transplants, and demand is growing. By all measures, the procedure is a lifeline, an umbilical cord, to good health. Statistics show that 28 of the 54 Duke patients are alive and well, Kurtzberg said. Mookie is just the latest baby to make a temporary home in a busy transplant unit, and Shorty is hopeful. "My Mookie now has a chance," she said as the baby slept in her arms.

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