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HEALTH

Premature Babies May Survive at 22 Weeks if Treated, Study Finds

By PAM BELLUCK MAY 6, 2015

A small number of very premature babies are surviving earlier outside the womb than doctors once thought possible, a new study has documented, raising questions about how aggressively they should be treated and posing implications for the debate about abortion.

The study, of thousands of premature births, found that a tiny minority of babies born at 22 weeks who were medically treated survived with few health problems, although the vast majority died or suffered serious health issues. Leading medical groups had already been discussing whether to lower the consensus on the age of viability, now cited by most medical experts as 24 weeks.

The Supreme Court has said that states must allow abortion if a fetus is not viable outside the womb, and changing that standard could therefore raise questions about when abortion is legal.

For most parents and doctors, the new study will intensify the agonizing choices faced about how intensively to treat such infants.

The study, one of the largest and most systematic examinations of care for very premature infants, found that hospitals with sophisticated neonatal units varied

widely in their approach to 22-week-olds, ranging from a few that offer no active medical treatment to a handful that assertively treat most cases with measures like ventilation, intubation and surfactant to improve the functioning of babies' lungs.

"It confirms that if you don't do anything, these babies will not make it, and if you do something, some of them will make it," said Dr. David Burchfield, the chief of neonatology at the University of Florida, who was not involved in the research. "Many who have survived have survived with severe handicaps."

Results of the study, published Wednesday in *The New England Journal of Medicine*, are likely to influence a discussion taking place among professional medical associations about how to counsel parents and when to offer treatment to such tiny babies.

Such groups have already been discussing whether it is reasonable to offer parents active medical treatment for babies born at 23 weeks. Some hospitals already do so. A 2014 summary of a workshop that involved the American College of Obstetricians and Gynecologists and the American Academy of Pediatrics said that "in general, those born at 23 weeks of gestation should be considered potentially viable" because more than a quarter of such babies survive when treated intensively. The report said nothing helps babies born at less than 22 weeks to survive.

But babies born at 22 to 23 weeks are a question mark, their chances for survival slim but varying by things like birth weight and whether the mother received treatment before delivery with corticosteroids that can help a baby's lungs and brain.

About 18,000 very premature babies are born annually in the United States, with about 5,000 at 22 or 23 weeks.

The study, involving nearly 5,000 babies born between 22 and 27 weeks gestation, found that 22-week-old babies did not survive without medical intervention. In the 78 cases where active treatment was given, 18 survived, and by the time they were young toddlers, seven of those did not have moderate or severe impairments. Six had serious problems such as blindness, deafness or severe cerebral palsy.

Of the 755 born at 23 weeks, treatment was given to 542. About a third of those survived, and about half of the survivors had no significant problems.

Dr. Carl T. D'Angio, director of neonatal clinical research at the University of Rochester Medical Center, who was not involved in the study, said that his center decided several years ago to offer active treatment to 23-week-old babies, and that many sophisticated neonatal units are doing the same. At 22 weeks and five days into pregnancy, Rochester offers corticosteroids to mothers in danger of delivering early, hoping the drugs can have 48 hours to work before delivery at the 23-week mark. But for 22-week-olds, he said, "we don't have enough to offer the babies to really offer them a reasonable chance of survival."

As techniques for keeping babies alive improve, parents face wrenching choices that are sometimes based on whether the estimated age is 22 weeks and one day or six days. The study found that hospitals tend to "round up," with babies closer to 23 weeks more likely to receive treatment.

But the authors and other experts also noted that gestational age is an educated guess, based on women's recollection of their last menstrual period and estimated fetal size. Other factors, including prenatal care and the fact that girls are often a week more mature than boys, should also influence decisions, experts say.

"It's very difficult to say to a mother, 'If you deliver today, I'm going to do nothing, but if you deliver tomorrow, I'm going to do everything,'" said Dr. Neil Marlow, a neonatologist at University College London.

The study, which evaluated cases from 2006 to 2011 at 24 hospitals in a neonatal network supported by the National Institute of Child Health and Human Development, found that four of the hospitals intervened for no 22-week-olds, five intervened for all 22-week-olds and the rest varied. In all, about a fifth of the 357 babies that age were treated. The reasons could include family preferences and hospital policy, the authors wrote.

"We can't really say whether the differences revolve around differences in values, that for some physicians or parents the risk of impairment might outweigh the decision for treatment," said Matthew Rysavy, a medical student at the

University of Iowa, who led the study with Dr. Edward Bell, a pediatrics professor there. At Iowa, Dr. Bell said, treatment is offered to most 22-week-olds, and he considers 22 weeks a new marker of viability.

“That’s what we think, but this is a pretty controversial area,” Dr. Bell said. “I guess we would say that these babies deserve a chance.”

Dr. Jeffrey M. Perlman, medical director of neonatal intensive care at NewYork-Presbyterian Hospital Weill Cornell Medical Center, takes a different view. He said it was important to consider that long months in neonatal units can be “like riding an obstacle course or flying in a plane with bad turbulence, and each of these down spirals can have an impact on the brain.”

At his hospital, “we go after the 24-weekers,” he said. “If it’s 23, we will talk to the family and explain to them that for us it’s an unknown pathway. At 22 weeks, in my opinion, the outcomes are so dismal that I don’t recommend any interventions.”

Dr. Bell pointed to success stories, including Chrissy Hutchinson, 32, of Manchester, Iowa. Her water broke in 2010 when she was 21 weeks and six days pregnant. The first hospital she went to “said there really was no chance of survival, and if the baby was born not breathing that they weren’t going to resuscitate or anything,” she said.

The Hutchinsons called the University of Iowa, and there, at 22 weeks and one day, Alexis was delivered, weighing 1.1 pounds. Alexis was treated and stayed in neonatal intensive care for almost five months. Now, Ms. Hutchinson, a pharmacy technician, said, aside from being more vulnerable to respiratory viruses, Alexis is a healthy 5-year-old.

Some of the study’s results suggest that among 22-week-olds who are treated, experiences like the Hutchinsons’ would be exceedingly rare because Ms. Hutchinson delivered so close to 22 weeks and did not have time for corticosteroids beforehand.

Danielle Pickering, 32, and her husband Clayton, a Baptist minister in Newton, Iowa, chose treatment when she was hospitalized in July 2012 at 22 weeks. “We

figured he was our baby, and he was what the Lord had given us, and we would just do everything we could,” said Ms. Pickering. She received corticosteroids and delivered Micah four days later. He spent more than four months in intensive care, had heart surgery, and was “one of the sickest babies” there.

Now “he is a spunky almost 3-year-old,” who has chronic lung disease and a slight speech delay, said Ms. Pickering, who is now 33 weeks into a healthy second pregnancy. After Micah, she said, “I feel like this baby that I’m about to have — this will be a piece of cake.”

Correction: May 6, 2015

An earlier version of a picture caption with this article misstated the surname of a girl who was born prematurely. She is Alexis Hutchinson, not Richardson.

A version of this article appears in print on May 7, 2015, on page A1 of the New York edition with the headline: Preterm Babies Can Be Viable at Earlier Birth.

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