

Partial Livers from Deceased Donors Saving the Lives of Infants



New research reveals that transplantation of partial livers from deceased adult and teen donors has become less risky for infants and young children, helping to save these young lives. Findings published online in *Liver Transplantation*, a journal of the American Association for the Study of Liver Diseases and the International Liver Transplantation Society, indicate that risk of organ failure and mortality from partial or split liver transplant was comparable to whole organ transplant in this pediatric population.

Available livers for transplantation are in short supply, particularly size-matched organs for the youngest patient on the waitlist. While there is evidence that partial organs donated from living donors are superior to those from deceased donors, they accounted for less than 11% of pediatric liver transplants in 2010. Since 2002, studies show an eight-fold increase in the use of partial grafts from deceased donors, accounting for up to 32% of liver transplants in children.

"Infants and young children have the highest waitlist mortality rates among all candidates for liver transplant," explains senior author Dr. Heung Bae Kim, Director of the Pediatric Transplant Center at Boston Children's Hospital in Massachusetts. "Extended time on the liver transplant waitlist also places children at greater risk for long-term health issues and growth delays, which is why it is so important to look for methods that shorten the waitlist time to reduce mortality and improve quality of life for pediatric patients."

To further understand outcomes of using deceased donor partial livers in infants, the team identified 2,679 liver transplant recipients under the age of two in the United Network of Organ Sharing (UNOS) database from 1995-2010. There were 1,114 partial livers and 1,565 whole organs from deceased donors that were used in the transplants analyzed. They examined mortality and graft survival over time.

Graft survival between partial and whole grafts were significantly different in 1995-2000, but comparable in 2001-2005 and 2006-2010, suggesting that transplants using partial livers became less risky over time. Adjusted risk of graft failure and mortality was similar for partial and whole organs in 2006-2010.

"Infants continue to have twice the mortality rate of adult candidates on the waitlist," concludes Dr. Kim. "Our study confirms that organ failure and mortality risk in the very young was similar for partial and whole organs from deceased donors. The transplant community must continue to look for ways to reduce mortality rates in pediatric patients and using partial livers from deceased, as well as living donors, may hold the key."

- **Full bibliographic information** "Deceased Donor Liver Transplantation in Infants and Small Children: Are Partial Grafts Riskier Than Whole Organs?" Ryan P. Cauley, Khashayar Vakili, Kristina Potanos, Nora Fullington, Dionne A. Graham, Jonathan A. Finkelstein and Heung Bae Kim. *Liver Transplantation*; (DOI: 10.1002/lt.23667) Online Publication: May 21, 2013, URL: <http://doi.wiley.com/10.1022/lt.23667>

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