

# Living donor liver transplants may drastically decrease mortality from liver failure

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Patients with acute liver failure (ALF) could be saved by a transplant from a living donor (LDLT), according to a new study in the September issue of *Liver Transplantation*, a journal by John Wiley & Sons. The recent experience of U.S. patients shows that recipient mortality rates and donor morbidity rates are acceptable.

Acute liver failure occurs more than 2,000 times per year in the United States and can quickly lead to coma and death. While spontaneous recovery can occur, for many patients the only effective therapy is liver transplantation. One-year survival for these transplant recipients is about 82 percent (just slightly less than for other indications) however, because of the shortage of donor livers, many patients with ALF die on the waiting list.

While other countries frequently use living donor liver transplantation for ALF patients, the treatment is rarely considered in the United States because of concerns about high post-operative mortality rates, risks to the donors, and whether donors can be appropriately evaluated during the rapid progression of ALF. The Adult-to-Adult Living Donor Liver Transplantation Cohort Study (A2ALL) provides a chance to study LDLT for ALF in the U.S. because it includes data from a large cohort of LDLT candidates at 9 U.S. transplant centers.

Researchers, led by James F. Trotter of the University of Colorado, report the outcomes of recipients with acute liver failure and their donors from the A2ALL study. It includes information from 1201 potential LDLT patients from January 1998 and April 2007. Just 14 (1 percent) of the patients had acute liver failure. Ten of these received LDLT, three received a liver from a deceased donor (DDLT), and 1 improved enough to be removed from the waiting list.

Survival rates were 70 percent after LDLT, compared to 67 percent of DDLT. Over a median of five years follow-up post-transplant, the nine surviving patients experienced 39 complications, a rate similar to other patients who'd undergone LDLT in the A2ALL study. Furthermore, the risks to the donors were acceptable—none died, while 50 percent experienced complications.

"This study demonstrates that LDLT may be performed safely in patients with ALF," the authors report. While the data was limited, and the patients may have been predicted to have more favorable outcomes than typical ALF patients, the findings are similar to the global experience with LDLT for ALF.

"In summary, these preliminary findings suggest that LDLT is a safe treatment option in selected patients with ALF," the authors conclude. "These results provide a rational basis for the continued, careful application of LDLT in patients with ALF."

An accompanying editorial by Chung Mau Lo of the University of Hong Kong, commends the authors for evaluating the role of LDLT for ALF in the United States. "The most striking finding was the rarity for patients with acute liver failure to be considered for LDLT in the United States," he writes.

"The concerns with the added donor risk and inferior recipient outcome which have led to the proscription of acute liver failure as an indication for LDLT in the New York Department of Health's guidelines were not borne out in the A2ALL study," Lo points out. Still, he suggests LDLT will continue to take a limited role in the United States, despite the potential for optimally timed liver transplant for patients with ALF.

Source: Wiley

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