

# Experts examine challenges of split liver transplantation

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Can split liver transplantation reliably yield grafts for two adults? Experts consider this question alongside new findings about the procedure in the July issue of *Liver Transplantation*, a journal by John Wiley & Sons.

The shortage of donor organs has led to advanced surgical strategies to increase opportunities for those in need of a transplant. An example is the split liver transplant (SLT), in which one donated liver is divided into the larger right hemisphere and the smaller left hemisphere, and the two halves are transplanted into two different patients. Recipients are typically one adult and one child, to account for the differing sizes of the grafts; and there has been scarce data on SLT involving two adult recipients.

Researchers led by Alessandro Giacomoni of Niguarda Hospital in Milan, Italy, report on a series of 16 SLTs with adult recipients that took place between May 1999 and December 2006. They report a discouraging rate of complications, and a 1-year survival of 69 percent, which was considerably lower than the 87 percent survival for their control group of whole liver transplant recipients.

"SLT for two adult recipients is a technically demanding procedure, which requires complex logistics and very experienced surgical teams both in liver resection and transplantation but yielding results debatable at best," they conclude. "Strong refinements in donor-recipient matching, preoperative donor evaluation, and surgical technique might

be the tools to improve the outcome."

In a different article in the same issue, researchers led by Nigel Heaton of London, suggest another approach to SLT. They point out that a lack of cadaveric donation has led doctors to pioneer the simultaneous transplant of two left liver sections from living donors. "The technique is practicable and has been associated with good outcome," they report. "Even if one of the grafts fails over time, the remaining graft hypertrophies and takes over function."

They suggest a new technique utilizing two left liver sections from two cadaveric donors, or the combination of a cadaveric left liver with one from a living donor as a way to help more patients in need of a transplant. "This would require significant infrastructure, logistical and organizational change," they say, but believe it could increase the number of transplants by 15 to 20 percent in the U.K.

In an editorial, Cristiano Quintini and colleagues at the Cleveland Clinic, contribute their experience with eight SLTs with two adult recipients. By combining technical refinements with an extensive learning curve, they were able to minimize graft failure and avoid patient death. "We continue to believe that adult/adult split liver transplantation is a viable option in highly selected situations," they report, while noting the promise in the dual graft technique suggested by Heaton, in spite of its practical difficulties.

"We look forward to a time when both SLT and living donation, separately or in tandem, have transitioned from an 'embryonic' phase into a routine and effective way of reducing the organ shortage," they conclude.

Source: Wiley

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