

Split and reduced-size liver transplantation

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Split LT is a valuable option for making the best use of - good-quality deceased donor liver grafts, by splitting the graft into a left lateral segment (segments II and III) for a paediatric recipient and an extended right liver lobe (segments I and IV-VIII) for an adult recipient. Not so commonly, the whole liver can be split as anatomical right and left lobes, the latter being used for a larger child or a smaller adult. The splitting *ex situ*, where the whole organ is procedure can be done - retrieved and split on the back-bench along the anatomical planes, so as to preserve the inflow and outflow vessels to both in situ splitting, liver transection is grafts (Figure 89.5). In performed during the donor procedure, similar to procuring a living liver donor graft. The major advantage of in situ splitting in contrast to *ex situ* bench splitting is that haemostasis on the cut surface can be obtained during the donor procedure with less blood loss from the cut surface during reperfusion in the recipient. In situ splitting also facilitates prompt transportation of the liver to transplant centres if the two split lobes are to be used in two different centres far away from each other, thereby reducing the cold ischaemic times for both organs. Although technically demanding, split LT is a safe procedure resulting in an increased number of LTs, increased feasibility of LT in children and a reduced waitlist mortality. Short- and long-term outcomes and survival with these grafts are similar to those with whole-graft LT. Reduced-size LT is orerunner of split LT and involves *ex vivo* resection of a full the f liver into an appropriate size liver to fi t a small adult, with the rest of the reduced-size portion being discarded. Reduced-size LT, unlike a split technique, does not produce an additional graft. It is therefore not widely practised and is reserved for situations where a small adult or adolescent patient requires an urgent transplant and a whole liver or an extended right lobe is too large for the abdominal cavity. Le Foie: Études anatomiques et

- Using grafts from ECDs is a strategy to address organ shortage in LT. An ECD graft has been described as an organ with an increased risk of poor graft function (liver from older donors or fatty livers) and/or transmission of disease (i.e. infection or malignancy) to the recipient because of unfavourable donor characteristics (Table 89.2). In comparison with DBD, DCD LTs have been associated with higher rates of biliary complications and graft loss, historically limiting their use. Worldwide, there is considerable variation in the contributions that DCD makes to deceased donation overall. While some countries have no DCD programmes whatsoever (such as India, where it is illegal to procure a DCD organ), in countries like the UK and Australia DCD accounts for 20-30% of all LTs. DCD livers reduce waiting list mortality (i.e. by taking patients off the LT waiting list) and there is survival advantage in accepting a DCD off er than waiting for a 'better' DBD liver, which is more pronounced in patients with advanced liver disease. Outcomes with ECD organs can be improved with careful recipient selection and possibly with machine perfusion of the donor liver, so as to assess its function and quality, prior to transplantation.

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