

### **Technical Advancements in Living Donor Liver Transplant**

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#### **ABSTRACT**

Over the past 2 decades, living donor liver transplantation has become a standard and accepted alternative to deceased donor liver transplantation, especially in countries with poor cadaveric donation rates. Numerous innovations in surgical technique along with improved understanding of post-transplant physiology have led to LDLT having comparable and sometimes exceeding outcomes of DDLT. The importance of venous outflow and adequate anterior sectoral drainage to minimize congestion has been central to improving safety and outcomes in LDLT. Portal vein thrombosis, once a contraindication to transplant is now tackled with excellent outcomes with improvement in surgical technique. Understanding of graft hemodynamics and portal flow has significantly increased the graft pool with acceptance of smaller grafts without lowering patient outcomes. Portal flow modulation techniques are routinely being used to minimize graft injury secondary to portal hypertension and the development of small for size syndrome. Innovative techniques for biliary reconstruction have been devised in a bid to minimize biliary complications. Adoption of microsurgical techniques to arterial reconstruction and utilization of extra anatomic arterial inflow has led to significant shrinkage of grafts lost to hepatic arterial dissection and thrombosis. This review highlights a number of technical advancements made in the field of liver transplant surgery made over the past decade; especially focusing on living donor transplantation.

**Key words:** Living donor liver transplant, biliary reconstruction, portal vein thrombosis, arterial reconstruction, MHV, inflow modulation.