

The experience of arterial reconstruction in adult-to-adult living donor liver transplantation

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A research team from China retrospectively investigated the experience of microsurgical hepatic artery reconstruction and management of hepatic artery thrombosis (HAT) in adult-to-adult living donor liver transplantation (A-A LDLT). Applying microsurgical technique and selecting appropriate anastomotic artery for hepatic arterial reconstruction could reduce the high risk of HAT during A-A LDLT.

Hepatic artery thrombosis (HAT), which is the most common vascular complication after living donor liver transplantation (LDLT), can result in graft loss and devastating consequences. Surgical techniques are suggested to an important factor in causing HAT. Despite improvements in surgical techniques, arterial reconstruction in LDLT has a high risk of [thrombosis](#).

With atraumatic microsurgical techniques, the reconstruction of HA was accomplished in 182 recipients (192 grafts) of adult-to-adult LDLT performed from January 2001 to September 2009 by a settled group of vascular surgeons of a research team from China. Their study will be published on June 7, 2010 in the *World Journal of Gastroenterology*.

Running sutures with back-wall first techniques were employed in all hepatic arterial reconstruction procedures by a settled group of vascular surgeons with low incidence of HAT. Interposition of great saphenous vein or cryopreserved vessel between recipient and graft was performed for

handling recipient hepatic arterial dissection with relatively good outcome.

In the authors' view, in order to decrease the incidence of HAT, the principle of hepatic arterial reconstruction will be followed in future clinical procedures, including: a settled group of vascular surgeons, running suture with intimal eversion, sufficient large caliber of stoma and atraumatic manipulation. Running suture may be a reliable alternative for anastomosis of small hepatic artery in diameter with low incidence of HAT following A-A LDLT. Nevertheless, randomized prospective controlled studies should be performed to validate these results.

More information: Yang Y, Yan LN, Zhao JC, Ma YK, Huang B, Li B, Wen TF, Wang WT, Xu MQ, Yang JY. Microsurgical reconstruction of hepatic artery in A-A LDLT: 124 consecutive cases without HAT. World J Gastroenterol 2010; 16(21): 2682-2688
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