

## **Outcome of Living Donor Liver Transplantation for Patients with Pre-operative Portal Vein Thrombosis**

Cheng-Wei Wang, MD; Ting-Jung Wu, MD PhD; Yu-Chao Wang, MD; Chih-Hsien Cheng, MD; Tsung-Han Wu, MD; Ruey-Shyang Soong, MD; Chen-Fang Lee, MD; Hong-Shiue Chou, MD; Kun-Ming Chan, MD; Wei-Chen Lee, MD

王誠偉，吳庭榕，王瑜肇，鄭志軒，吳宗翰，宋睿祥，李正方，周宏學，詹昆明，李威震。

Division of Liver and Transplantation Surgery, Department of General Surgery, Chang Gung Memorial Hospital at Linkou, Taoyuan, Taiwan.

林口長庚醫院一般外科系肝臟暨移植外科

### **Purpose:**

Living donor liver transplantation (LDLT) in patients with pre-operative portal vein thrombosis (PVT) remains a technical challenge for transplant surgeons and is reported as higher complication and poor survival in compare to patients without PVT. In this study, we reported a single center experience of LDLT for patients with pre-operative PVT and analyzed the patient outcome.

### **Method:**

A total of 393 patients who underwent LDLT at Chang Gung Memorial Hospital at Linkou between June 2006 and December 2013 were enrolled into this study. There were 293 male and 100 female patients with the age from 10 to 69 year-old, median 54 year-old. PVT was found in 42 (10.7%) patients. Their clinical features, surgical management, and outcome were analyzed. The date of end follow-up was recorded to December 31, 2014.

### **Results:**

The clinical characteristics of patients with or without PVT were not significantly different. The surgical management of patients with PVT included a resection of thrombus (n=13), or eversion thrombectomy (n=17) followed by direct end-to-end anastomosis between the liver graft and recipient's portal vein (PV), and interposition graft by cryopreserved iliac vein between liver graft and recipient's PV (n=2), coronary vein (n=7), SMV (n=2) or renal vein (n=1). Eight patients died during hospitalization. Patients with PVT had relative higher hospital mortality rate (19%) in compare to patients without PVT (14.2%) but it did not show statistic difference significantly. Nine (21.4%) patients experienced re-stenosis of PV after LDLT. Among them, 4 patients underwent interventional therapy for PV stenosis (2 balloon dilatation and 2 insertion of metallic stent) and the other 5 patients kept in observation because normal liver function and stenosis < 50%. At median follow-up 28.7 months, the 1,3,and 5 years overall survival for patients with PVT was 78.4%, 74.8% and 70.4%, respectively. Further analysis of patients' survival according to PVT grade, type, venous graft application, and reconstructed portal flow routes also exhibited no significant differences.

**Conclusions:**

LDLT for patients with PVT is clinically feasible and should not be considered as a contra-indication. However, ideal surgical management is needed to get favorable outcome.