Introduction: Living-donor liver transplant (LDLT) requires more complex surgical techniques than do all other organ transplant procedures. One of the main technical issues in LDLT is reconstruction of the right hepatic vein (RHV). Compared with cadaveric liver transplant, RHV reconstruction in living donors requires special surgical techniques to prevent stenosis because the site of reconstruction can be altered owing to graft regeneration and rotation. We describe a novel technique for RHV reconstruction that is simple and fast, and does not require cadaveric or artificial vessels or additional time.

Methods: Of 159 patients who underwent LDLT at our institution between May 2010 and April 2016, we included 152 in this study. Conventional RHV reconstruction was performed in 100 patients, while the diamond-shaped patch (D-patch) technique was performed in 53. For the D-patch technique, the posterior aspect of the RHV needs to be dissected from the liver parenchyma during donor heptectomy, which prevents stenosis due to liver rotation after graft regeneration. A D-patch obtained from the hepatic vein of the recipient liver was used on the anterior aspect of the RHV for reconstruction. The Student’s t test and χ2 test were used for statistical analysis.

Results: Rates of intervention for RHV stenosis during the first month were significantly different between the conventional reconstruction and D-patch groups (19.2% vs 3.8%; P = .01). The time taken to perform the D-patch technique was similar to that for conventional reconstruction (anhepatic period, 104.9 ± 47.3 minutes vs 106.7 ± 42.0 minutes; P = .82).

Conclusions: The D-patch technique for RHV reconstruction in LDLT is a simple, fast, and feasible surgical technique that can be performed without using cadaveric or saphenous veins.

References