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## P054

## Liver graft portal vein wedged-patch venoplasty for size matching in living donor liver transplantation

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**Introduction** : Portal vein (PV) size matching is important to prevent anastomotic stenosis in living donor liver transplantation (LDLT). In right liver grafts, the diameter of graft PV is usually >10 mm, thus PV size matching does not become a serious problem in adult recipients. If the recipient PV is very large, funneling fence can be attached to the graft PV for easy anastomosis. However, if the diameter of graft PV is <8 mm, it can induce anastomotic stenosis. We experienced a few cases of PV anastomotic stenosis due to small graft PV in >5000 LDLT cases, but graft PV widening was not attempted because graft PV is considered as being a no-touch area.

**Methods** : As thinking out of box, we performed wedged-patch venoplasty to abnormally narrow graft PV.

**Results** : A 4 year-old female patient underwent repeat LDLT due to progressive deterioration of graft function for 3 years. At the first LDLT operation for biliary stresia, an iliac vein conduit was interposed for PV reconstruction. At the second LDLT operation, the diameter of the interposed PV was 10 mm, but left liver graft PV was 6 mm-sized. Uniquely, the left PV was waisted only at the first-order PV. To resolve the PV waist, a longitudinal incision was made to release the waist. A cold-preserved iliac vein patch was inserted to widen the PV orifice. The size of patch was adjusted to match with the size of recipient PV. The patient recovered uneventfully.

**Conclusions** : This wedged-patch venoplasty technique can be applied to small-sized graft PV.

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