Point-by-point responses to the issues raised in the peer-review report(s):

Reviewer #1:

1. (P5, L13) The GRWR of the preoperative estimated one was 0.55, which has a discrepancy with the actual size. What is the reason of the difference? If the preoperative evaluated size of the graft was 0.41, is the LDLT indicated?

A discrepancy between the actually harvested graft weight and the preoperative volumetric estimation is often observed in living donor liver transplantation. The blood weight contained in the graft may be one cause of the graft weight discrepancy.

We also strongly believe that the LDLT can be indicated even if the preoperative evaluated size of the graft was 0.41. The safety limit of SFSG can be closely related to the factors of the donor, recipient, and surgical technique. Therefore, the good outcomes of this LDLT with a GRWR of 0.41 could be attributed to the following reasons.

First, the donor was young without significant hepatic steatosis or other parenchymal disease.

Second, the patient’s condition was not so bad at the time of LDLT, being reflected by low MELD score. And he had no other underlying disease except for liver cirrhosis of Child-Pugh A class.

Third, the graft had no long ischemic time, and the graft implantation resulted in no derangements in the vascular inflow and outflow, which could be corroborated by the

observation that the AST and ALT levels were maintained less than 100 U/L throughout hospital stay.

Fourth, the patient had no postoperative morbidity such as infection, rejection, and vascular or biliary complication. Any complication may tip the balance of patient recovery especially in patients with SFSG.

2. (P5, L17) It is described that all the main procedures were done by one surgeon. Is the donor liver harvesting and the whole liver resection of the recipient done by the same person?

Yes, all the main procedures were performed by one surgeon (S.H.K). He performed donor hepatectomy, bench procedure, recipient hepatectomy, and graft implantation. In detail, in recipient hepatectomy, a junior surgeon opened the abdomen and mobilized both lobes of liver while the surgeon (S.H.K) completed donor hepatectomy and bench procedure. Then he came over to the recipient operating room. He performed the hilar dissection and complete mobilization of liver from inferior vena cava.

3. (P6, L6) Is the portal modulation considered when the actual size was found to be 0.41?

Preemptive portal modulation is not considered even if the actual size was found to be 0.41. However, if serious liver congestion or cut surface bleeding had developed after reperfusion or

the small-for-size syndrome had happened postoperatively and the liver function had become worse, portal flow modulation would have been considered to reduce the graft damage.

Reviewer #2:

1. Did the authors measure preoperative portal vein pressure of the recipient? If so, how high was the portal pressure?

We don’t measure preoperative portal vein pressure of the recipient.

2. How did the authors justify their decision of transplanting such a small graft and risk small for size syndrome rather than enlisting the patient for deceased donor waiting list? Well done for the impressive work.

His daughter was the only source of organs in our country where the availability of the deceased donors was severely restricted.

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