

E03

**An adult-to-adult left lobe dual grafts living donor liver transplantation
using a saline-filled isolation bag : a case report**

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Living donor liver transplantation (LDLT) is widely performed in South Korea. To avoid post-transplant liver failure, the graft to be implanted should not be too small. For this reason, LDLT, using right lobe graft is preferred. However, because donor safety takes precedence to the recipient's outcome, the remaining donor's liver volume should not be less than 35% of the original liver. When donation of right lobe is not possible due to this particular reason and left lobe volume is not sufficient for recipient, dual-graft LDLT, using left lobe grafts is performed as an alternative.

Among the many technical issues in LDLT, using dual left lobe grafts is the configuration of the heterotopically implanted liver at right upper fossa, rotated in 180°. Several technical modification is needed. As previously described by S. G Lee and colleagues, A temporary prosthetics must be placed, posterior to the orthotopic graft to reduce undue tension to the hilum. Tissue expander is an usual choice. By reducing filling fluid through externally positioned catheter, it allows the graft to grow and fill up the space. However, it requires another surgical procedure to remove the tissue expander at post-transplant day 14. In our case of LDLT, using dual left lobe grafts, a saline-filled isolation bag was used instead of a tissue expander. Since it is thin and shrinkable to the size of a small drain, no additional operation was needed for removal.

This is a novel modification to the originally described dual-graft LDLT procedure which used tissue expander. The cold ischemic time of the first and second grafts were 190 and 240 minutes, respectively. The total operation time was 770 minutes. Immunosuppression was the same as that of a single graft transplant. Postoperative liver function was satisfactory, and there were no specific complications related to this particular surgical technique. A daily-reduced saline-filled isolation bag was completely removed on operative day 14. The patient was discharged on postoperative day 25 without an episode of rejection or any sign of infection. A postoperative follow-up CT scan of the patient demonstrated the balanced regeneration of both grafts. We found that this procedure using a saline-filled isolation bag is safe and feasible.

