lobar lung transplantation on both clinical and health services outcomes.

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Commentary: Better too big than too small

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In this issue of the *Journal*, Schiavon and colleagues¹ reported a 2-institution retrospective study to assess early- and long-term outcomes associated with lobar reduction in lung transplantation for adult small recipients. The propensity score was estimated on 571 patients (522 in group I = no lobar reduction, and 49 in group II = lobar reduction). Although group II showed worse long-term pulmonary function, the 2 groups had comparable survival outcomes. Compared with standard lung transplantation, lobar lung transplantation requires more careful intraoperative judgements and is more technically demanding. Therefore, lobar lung transplantation should be performed by experienced surgeons. The authors are to be congratulated for completing this important study.

The most difficult and important part of lobar transplantation is how to make a final call for lobar reduction. Small recipients include small-height recipients with normal chest configuration and recipients with small chest cavities due to

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CENTRAL MESSAGE

Lobar lung transplantation provides similar survival to standard lung transplantation for small patients.

flat chest and/or elevated diaphragm. As the authors state, donor-to-recipient predicted total lung capacity and heights ratio are useful for recipients with normal chest cavity but may not be useful for recipients with a flat chest. For the latter recipients, an “eyeball evaluation” by experienced surgeons during the transplant procedure is essential.

Living-donor lobar lung transplantation (LDLLT) is indicated for patients considered too ill to await cadaveric lung transplantation.² In LDLLT, the right and left lower lobes are removed from 2 healthy donors and these 2 lobes are implanted in the recipient as whole right and left lungs. LDLLT is technically similar to lobar reduction cadaveric lung transplantation for a small recipient. Having done more than 150 LDLLTs, I believe lower lobe implantation works well because of the similar shape between the graft

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and the chest cavity. Satisfactory bronchial healing has been reported, probably due to short graft bronchus.³ In the report of Schiavon and colleagues,¹ 7 patients received right lower lobectomy, and right upper middle lobes were implanted, leaving right lower bronchial stump in the graft. Although satisfactory bronchial healing was obtained in this manuscript, other groups reported life-threatening bronchopleural fistula.⁴ We reported lobar bronchial anastomotic technique without leaving donor bronchial stump in the graft.⁵

After implanting excessively undersized grafts, lung edema with high pulmonary vascular resistance may be encountered. Once it occurs, outcome is poor because treatment options are quite limited. After implanting excessively oversized grafts, it may not be possible to close the chest, because chest closure may increase airway resistance, atelectasis, and hemodynamic instability. However, the

oversized grafts may be successfully implantable by lobar reduction. It is better to be too big than too small.

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