

Registry Report of Initial 50 Cases at Fukuoka University Lung Transplant Program

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Abstract

Background: Lung transplantation has been established as an effective treatment option for patients with end-stage severe lung disease. The Fukuoka University Hospital Lung Transplantation Program began registration of lung transplants in 2005. Herein, we summarize our single-center experience with performing 50 lung transplantations over the past 16 years.

Patients and methods: Between December 2005 and June 2021, 129 patients registered in the Japan Organ Transplantation Network from Fukuoka University Hospital, and 50 recipients underwent lung transplantation (five living-donor lobar lung transplantations and 45 cadaveric lung transplantations). We retrospectively examined the patients' characteristics and outcomes. Additional analysis was performed after dividing the cohort into two groups based on cohorts (2005–2015, cohort 1, n = 52 and 2016–2021, cohort 2, n = 77).

Results: The demographics and preoperative characteristics of cadaveric lung transplantation candidates did not significantly change over time. However, the number of registrations and the cadaveric lung transplantations performed increased in cohort 2 compared with cohort 1. Bilateral lung transplantation was performed more frequently in cohort 2. We also observed a shorter length of postoperative intensive care unit stay in the present cohort (9.5 days in cohort 2 vs. 15.7 days in cohort 1; $P = .04$). Although there was no significant difference in the length of hospital stay between the two cohorts, acceptable 30-day and 1-year survival outcomes were achieved. The survival rate after lung transplantation at the end of 2015 and 2021 was 69.7% and 85.9% at 1 year, and 50.8% and 73.7% at 3 years, respectively.

Conclusions: Although the demographic characteristics of patients over the study period did not change, the number of candidates and recipients increased significantly. A significant improvement in the 1-year and 3-year survival was observed in the more recent cohort. Despite the limited number of cases, our program had comparable characteristics and outcomes to the international registry data.

Key words: cadaveric lung transplantation, living-donor lobar lung transplantation, lung transplantation candidate, waitlist mortality