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Current status and characteristics of lung transplantation for elderly people in Korea: Analysis of Korean Network for Organ Sharing Data

Jin Ho Jang¹, Wonjin Lee¹, Taehwa Kim¹, Jong Myung Park¹, Joo Hyung Son¹, Do Hyung Kim¹, Woo Hyun Cho¹, Hye Ju Yeo¹

Introduction: The incidence and prevalence of end-stage lung disease are increasing with age. Accordingly, the number of lung transplants for patients over 65 years of age is increasing worldwide. This study aims to determine the current status of lung transplantation in elderly patients in Korea.

Methods: We conducted a retrospective analysis of transplant candidates and transplant patients registered in Korean Network for Organ Sharing between March 2010 and August 2023. The patients were analyzed in two groups: <65 and 65 years old.

Results: During the study period, there were 2,574 patients registered for lung transplantation, of whom 511 were elderly. In the registered elderly patients, 68.5% had idiopathic pulmonary fibrosis (group C), 26.6% had acute respiratory distress syndrome and other interstitial lung diseases (group D), 4.3% had chronic obstructive pulmonary disease (group A), and 0.6% had primary pulmonary hypertension (group B). Among the elderly patients on waitlist, 188 (36.8%) received lung transplantation. Median survival in lung transplant recipients aged 65 years was 30.2 months (95% CI: 6.93-53.47 months). The 1-year and 3-year post-transplant mortality rate was 40.6% and 62.7% which were significantly higher than in the non-elderly transplantation (1-year, 40.6% vs. 28.4%, p = 0.002; 3-year, 62.7% vs. 48.5%, p = 0.003). In the multivariate COX regression analysis, age 65 years (hazard ratio [HR], 1.49, p =0.004), and high urgent status at registration (HR, 1.83, p < 0.001) were significantly associated with 1-year post-transplant mortality. In a subgroup analysis of patients over 65 years of age, high urgent status at registration (HR, 2.04, p =0.006) was also a major risk factor for 1-year post-transplant mortality.

Conclusion: Age over 65 years significantly affects 1- and 3-year survival after lung transplantation. High urgent status at registration is an important factor affecting the survival of elderly lung transplant patients.