Impact of Donor Age on IPF Patient Survival in Lung Transplantation

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INTRODUCTION

Currently, idiopathic pulmonary fibrosis (IPF) patients are the most common candidates for single or double lung transplantation[1]. Due to their high mortality on the waiting list[2], potential older donors are considered frequently for lung transplantation.

We investigated the survival outcome of IPF patients receiving lungs from donors aged <50 and ≥50 years.

METHODS

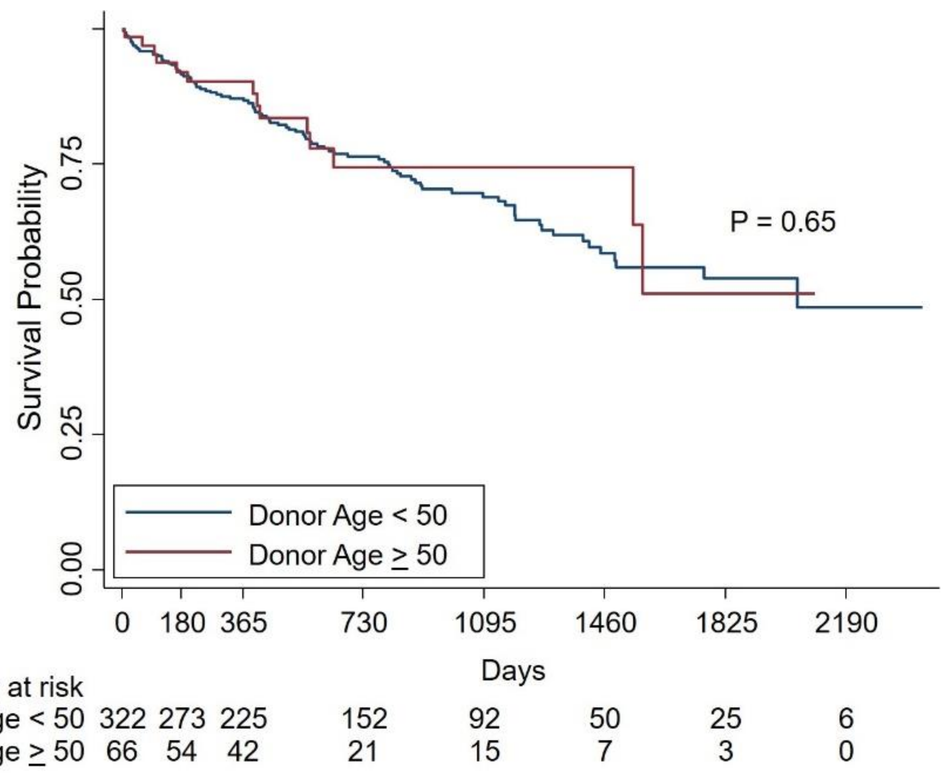
We performed a retrospective study of IPF transplant recipients that underwent either a single or double lung transplant at our center (Mar-2012 to Jun-2019) and patients were divided into two groups (donors age <50 vs. ≥50 years old).

Variables such as age, sex, height, BMI, lung allocation score (LAS), length of stay (LOS), use of cardiopulmonary bypass (CPB), types of induction and surgical procedures were compared between the two groups for significance ($p<0.05$) using STATA Inc (10.0). Survival was compared by log-rank test using a Kaplan-Meier curve.

Data were expressed as mean ± standard deviation and p-value <0.05 was considered significant.

RESULTS

Patients (n=388) were separated into two groups based on donor age: 8-49 years old (n=322) vs. 50-65 years old (n=66). Demographic data showed no significant differences between the two groups (<50 vs. ≥50 donor age) for recipients' age (p=0.49), sex (p=0.64), height (p=0.90), BMI (p=0.10), and donors' sex (p=0.20). Clinical parameters such as LAS (p=0.46), LOS (p=0.34), CPB on vs off (p=0.40), Campath vs. Simulect induction (p=0.40), and antero-apical, clamshell, median sternotomy surgical approaches (p=0.59) were not significantly different between the two donor age groups. Log-rank test for equality of survivor functions demonstrated no significant difference between cohorts (p=0.65; KM curve).



Survival Probability

Time	< 50	≥ 50
30 days	98%	98%
3 months	96%	97%
6 months	92%	92%
1 year	87%	90%
2 years	76%	74%
3 years	69%	74%

CONCLUSIONS

In idiopathic pulmonary fibrosis patients, survival outcomes after lung transplantation using donors below 50 years old were similar to using donors ≥ 50-65 years old.

Utilizing suitable older donor lungs has the potential to increase the donor pool and reduce waitlist mortality in IPF patients.

REFERENCES

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