Lung transplantation for acute respiratory distress syndrome: a retrospective European cohort study

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Most ARDS patients are bridged by mechanical support to LTx. 40 patients were identified in 48 European centres. 31 survived until transplantation and 1-year survival was 71% after LTx. The selection process remains ethically challenging. https://bit.ly/3GKwPL3

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Abstract

Background The published experience of lung transplantation in acute respiratory distress syndrome (ARDS) is limited. The aim of this study was to investigate the contemporary results of lung transplantation attempts in ARDS in major European centres.

Methods We conducted a retrospective multicentre cohort study of all patients listed for lung transplantation between 2011 and 2019. We surveyed 68 centres in 22 European countries. All patients admitted to the waitlist for lung transplantation with a diagnosis of "ARDS/pneumonia" were included. Patients without extracorporeal membrane oxygenation (ECMO) or mechanical ventilation were excluded. Patients were followed until 1 October 2020 or death. Multivariable analysis for 1-year survival after listing and lung transplantation was performed.

Results 55 centres (81%) with a total transplant activity of 12 438 lung transplants during the 9-year period gave feedback. 40 patients with a median age of 35 years were identified. Patients were listed for lung transplantation in 18 different centres in 10 countries. 31 patients underwent lung transplantation (0.25% of all indications) and nine patients died on the waitlist. 90% of transplanted patients were on

ECMO in combination with mechanical ventilation before lung transplantation. On multivariable analysis, transplantation during 2015–2019 was independently associated with better 1-year survival after lung transplantation (OR 10.493, 95% CI 1.977–55.705; p=0.006). 16 survivors out of 23 patients with known status (70%) returned to work after lung transplantation.

Conclusions Lung transplantation in highly selected ARDS patients is feasible and outcome has improved in the modern era. The selection process remains ethically and technically challenging.