

Lung transplantation in patients with COVID-19- the early national experience

Objective- The aims of this analysis are to describe the early national experience of COVID-19 patients who received lung transplants (LT) and compare characteristics and short-term outcomes of non-COVID-19 acute respiratory distress syndrome (ARDS) to COVID LT recipients.

Methods- We queried the Organ Procurement and Transplantation database for adults (?18 years of age) receiving LT from January 2009 to April 1, 2021 with diagnoses of ARDS (diagnosis code 402) or COVID-19 (diagnosis codes 1616, 1617, or presence of "COVID" in open text of diagnosis).

Results- We identified 88 COVID-19 LT recipients: 64% (n = 56) COVID-19 ARDS, 34% COVID-19 fibrosis (n = 30), and 2% (n =2) COVID-19, unspecified. COVID-19 LT recipients were older (p<0.001), more often male (p=0.01), were less frequently dependent on ECMO (p<0.001), had a better functional status (p<0.01), and a lower mean arterial pressure at time of transplant (p = 0.03) than ARDS LT recipients. Limited follow-up data (70% (n = 66) COVID-19 LT recipients had available follow-up data at 30-days post-transplant; 95% (n= 59) COVID-19 LT recipients were alive 30 days postoperatively) suggests that LT is a viable option for COVID-19 patients with irreversible organ damage.

Conclusions- As the SARS-CoV-2 pandemic continues to affect patients and families worldwide, treatment knowledge gaps persist, including the role and effectiveness of lung transplantation. Limited follow-up data suggests that though older, more predominantly male, and less severely functionally compromised at time of transplant than non-COVID-19 ARDS LT recipients, cARDS patients with evidence of irreversible lung damage respond well to LT. As the number of COVID-19 lung transplant patients increases and longer term follow up data becomes available, the role of lung transplantation in the setting of COVID-19 will become better defined and more completely understood.

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Additional Resources

 $\bullet \ \underline{https://files.aievolution.com/prd/aat2101/abstracts/abs_1719/AATSPerioperativeOutcomesData.docx$