Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Summary: Pulmonary fibrosis secondary to COVID-19 pneumonia can be successfully treated with VV-ECMO and subsequent lung transplantation in select patients. Special consideration should be given to this patient population as they may not meet traditional listing requirements. We report a 100% oxygen-free survival rate at six months.

(919)

Single Lung Transplantation for Pulmonary Fibrosis Secondary to COVID-19

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Introduction: As of April 2021, 78 lung transplants (LTx) were performed for a diagnosis of COVID-19: 50 for COVID-19 ARDS and 28 for pulmonary fibrosis. Bilateral LTx has been recommended as many patients develop significant pulmonary hypertension. Additionally, native lung explants may include cavitary areas of pneumonia, which could serve as a nidus for infection. Single LTx (SLTx) can be considered in patients who have chronic pulmonary fibrosis secondary to COVID-19 with a short window to receive a transplant, or who would otherwise be considered for a single lung. There have been no published cases of a single lung transplant for COVID-19 pulmonary fibrosis. We present a case of a patient with pulmonary fibrosis from COVID-19 who underwent SLTx.

Case Report: A 70yo male with O+ blood type was hospitalized 8/2020 to 10/2020 with COVID-19 pneumonia, treated with Remdesivir and Tocilizumab. He had hypoxia but never required intubation. His course was complicated by bilateral pneumothoraces requiring chest tubes. He developed pulmonary fibrosis requiring 6 L of oxygen at rest. CT scan of his chest showed multifocal, peripheral prominent ground glass opacities and interlobal septal thickening with traction bronchiectasis. Ventilation-perfusion scan demonstrated 22% perfusion to the left lung and 78% to the right lung. Right heart catheterization showed pulmonary artery pressures of 36/12 mmHg. His pulmonary function test was suggestive of restrictive disease (FEV 0.81 L [30%], FVC 0.96 L [27%], and FEV1/FVC 85%) that had worsened over time. He was presented at multidisciplinary review board with recommendation to list for left SLTx, which was activated August 2021. The patient was admitted in September 2021 and underwent left single lung transplant via left anterolateral thoracotomy, off cardiopulmonary bypass. Total ischemia time was 3:54. Explant pathology showed end stage pulmonary fibrosis. The patient was extubated on postoperative day 1 with an uneventful postoperative course. He was discharged to skilled nursing facility on postoperative day 26 for rehabilitation.

Summary: SLTxp is safe and feasible for COVID-19 related pulmonary fibrosis in well-selected patients who have a short window to receive a transplant.

(920)

Lung Transplant from a DCD Donor with a Previous Symptomatic COVID Infection

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Introduction: Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is a worldwide pandemic affecting more than 172 million confirmed cases. The likelihood of historic donor infection is increasing. Here we report a lung transplantation of a previously SARS-CoV-2 positive organ donor.

Case Report: A 49-year-old female who underwent left single lung transplantation for interstitial lung disease. The lung was obtained from a donation after cardiac death (DCD) using abdominal rerperfusion of a 23 years old female donor died of intracranial bleeding with history of covid infection 8 month prior to lung donation. According to the donor records, the symptoms were mild, and required no hospital admission. She had ongoing loss of taste and smell till time of donation. There were no respiratory symptoms. At time of retrieval, chest x ray was normal and blood gases were normal, however, bronchoscopy revealed severe inflammation of the right-side mucosa so the decision was to proceed with the left lung only as it had normal blood gases, good recruitment and no consolidation as well as non inflamed bronchial mucosa. patient had single off pump left lung transplant through left anterior thoracotomy approach. After the surgery, patient was extubated on day 1 in ICU, discharged from ICU on day 3 and discharged from the hospital after 27 days. There was no evidence for primary graft dysfunction or acute rejection. After 6 month of the surgery, FVC is 2.26 L (78.2% predicted) and FEV1 is 1.9L (70.2% predicted).

Summary: This case showed that it is possible to proceed with lung transplant from a donors who had previous mild covid infection. As DCD donation might limit preoperative invasive investigations such as bronchoscopies careful examination and proper radiological and functional assessment for the donor lung after donation including EVLP needs to be considered.

(921)

Successful Percutaneous Mechanical Suction Thrombectomy of Extracorporeal Filtration System Following Bilateral Lung Transplantation Secondary to COVID-Pneumonia

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Introduction: COVID infections show increased risk of thromboembolic events. We report a case of a 43 year old male with acute Covid-19 pneumonia necessitating veno-venous ECMO and RVAD support as bridge to pulmonary transplantation. At transplant, he had thrombus along his extracorporeal pulmonary artery cannula necessitating percutaneous mechanical thrombectomy.

Case Report: The patient presented as a transfer to our institution with COVID-19 related ARDS in refractory respiratory failure with multiple bronchopleural fistulas. Shortly after admission, veno-venous ECMO was initiated and over time was fully ECMO dependent due to extensive tissue destruction with essentially no functional lung tissue. He was converted to right internal jugular-left subclavian vein ECMO-RVAD configuration while assessing for transplantation. After 135 days of support, a suitable donor was identified and was taken for bilateral lung transplantation with ECMO/RVAD support. This was complicated by a frozen chest, massive transfusion, and primary graft dysfunction necessitating postoperative maintenance of circulatory support. Intraoperatively, a large thrombus burden was found along the pulmonary artery outflow cannula. His chest was left open at that time while his graft recovered. Three days later, a percutaneous suction thrombectomy device was inserted through his right femoral vein and under TEE guidance, he underwent suction thrombectomy of the pulmonary artery cannula clot burden (Figure 1). He was decannulated and underwent chest closure thereafter. He was anticoagulated post-operatively and has not had any further thromboembolic events.

Summary: Acute COVID-19 infection leads to a known increased risk of thromboembolic phenomena. We present an interesting approach to removal of ECMO-cannula associated thrombus in severe SARS-CoV-2 infection necessitating bilateral lung transplantation.