

Selection Criteria for Lung Transplantation in COVID-19 Patients



In May 2020, a team led by thoracic surgeon Konrad Hoetzenecker of the Department of Surgery of MedUni Vienna and Vienna General Hospital performed a lung transplant on a 44-year-old patient who had been seriously ill with COVID-19. She thus became the first patient in Europe to receive a lung transplant for this indication.

The Vienna lung transplantation programme now plays a leading role in an international consortium comprising experts from the USA, Europe and Asia. Based on the expertise from Vienna, approximately 40 transplants have been carried out on patients with COVID-19 throughout the world.

A study published in "The Lancet Respiratory Medicine" outlines the first general selection criteria proposed by the consortium for lung transplantation in COVID-19 patients.

"We have collated the first experiences in the world of performing lung transplants on COVID-19 patients. It is clear that such a complex intervention should only be considered for patients who, by virtue of their age and good general health, have a good chance of recovery with new lungs," explains Konrad Hoetzenecker, Head of the lung transplantation programme at MedUni Vienna and Vienna General Hospital. The Vienna team performs around 100 lung transplants a year, making it one of the largest programmes in the world, alongside Toronto, Cleveland and Hanover.

Guidelines

The following factors were established as criteria for potential transplantation:

- Exhaustion of all conservative treatment options
- No recovery of the COVID-19-damaged lungs despite at least four weeks of ventilation/ECMO
- Evidence of advanced and irreversible lung damage in several consecutive CT scans
- Age below 65 and no relevant comorbidities

In addition, patients must be in good physical condition and have a good chance of complete physical rehabilitation following the transplant. "These guidelines can be applied worldwide for making a sound selection of patients who are suitable for a lung transplant following a COVID infection."

The surgical team at MedUni Vienna and Vienna General Hospital has carried out twelve lung transplantations on COVID-19 patients, demonstrating that even the most seriously ill patients, who would otherwise die, can survive with a lung transplant.

Source: [Medicial University of Vienna](#)

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Published on : Tue, 6 Apr 2021