

Double lung transplants save lives of sickest COVID patients

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Mayra Ramirez in recovery after transplant

(HealthDay)—Two coronavirus patients who became so sick that double

lung transplants were their only chance for survival are now recovering from their harrowing journeys, their doctors report.

Mayra Ramirez, 28, and Brian Kuhns, 62, are the first known COVID-19 cases in the United States where such a drastic procedure was tried, according to their doctors at Northwestern Medicine in Chicago.

"Mayra and Brian wouldn't be alive today without the [double lung transplants](#). COVID-19 completely destroyed their lungs and they were critically ill going into the transplant procedure, making it a daunting undertaking," said Dr. Ankit Bharat, chief of thoracic surgery and surgical director of the Northwestern Medicine Lung Transplant Program.

"When we opened Mayra and Brian's chest cavities, large parts of their lungs were necrotic [dead] and filled with infection," Bharat said in a Northwestern news release. "The severe damage and inflammation to the lungs had caused pressure overload on the heart, which further made the surgery quite complex. One misstep in the operating room could have led to catastrophic consequences."

"Nevertheless, the success of these transplants emphasizes that surgical innovation can also play an important role in helping some critically ill COVID-19 patients," he added.

Ramirez, a Chicago resident, was the first to undergo the complex surgery, on June 5.

Her battle with the coronavirus began in the spring: Other than having an autoimmune disease that affects the spinal cord and nerves of the eyes, she was healthy and took extra precautions when COVID-19 hit Illinois.

"In March, I started working from home and never left my house," Ramirez explained. "But in April, I contacted my doctor, complaining of fatigue, chronic spasms, diarrhea, and loss of taste and smell. I only had a slight temperature of 100 degrees, so I monitored my symptoms from home and kept in touch with the COVID-19 hotline every day. It wasn't until April 26 that I felt really bad and went to the emergency department. From there, everything was a blur."

Within 10 minutes of being admitted to the hospital, Ramirez had to be placed on the ventilator. She spent six weeks on a ventilator and ECMO, a life support machine that does the work of the heart and lungs. By early June, her lungs were so damaged that it was clear that a double [lung](#) transplant was her only option, her doctors said.

No memory of months in ICU

"I don't remember anything during my six weeks in the COVID ICU. When I finally woke up, it was the middle of June and I had no idea why I was in a hospital bed," Ramirez recalled. "Wiggling my toes was difficult and it felt like I had lost a lot of cognitive abilities.

"But since my transplant, there hasn't been a single day where I've taken a step back," she added in a Northwestern news release. "Yes, it's taken a mental and physical toll on my body, but even on my lowest days, I'm able to do a little bit more than the day before."

Finally, on July 8, Ramirez was discharged from the hospital and continues to receive occupational and physical therapy.

"People need to understand that COVID-19 is real. What happened to me can happen to you. So please, wear a mask and wash your hands. If not for you, then do it for others," Ramirez stressed.

Brian Kuhns with Dr. Bharat after the transplant

Kuhns' COVID-19 ordeal also began in March. The owner of an Illinois auto shop complained of headaches, stomach pains and a fluctuating temperature. After developing a cough, Kuhns went to a local emergency room on March 18. That was the last time his wife, Nancy, and their two daughters would see him for nearly four months.

"No one can prepare you for the emotional toll COVID-19 takes on a family. Not being able to see, touch or hold your loved one as they're fighting for their life in the ICU is extremely difficult," Nancy Kuhns said. "Before COVID-19, Brian was a pretty healthy guy who loved music, cars and making people laugh. But he also thought COVID-19 was a hoax. I assure you; Brian's tune has now changed. COVID-19 is not a hoax. It almost killed my husband."

Complications, and long hours in surgery

Kuhns was treated at another hospital before being transferred to Northwestern Memorial for consideration of a double-lung transplant. Within 72 hours of being waitlisted, the transplant was performed on July 5. Typically, a double lung transplant takes six to seven hours, but this surgery took close to 10 hours, his doctors said.

"Prior to Brian's arrival at Northwestern Memorial, he developed an invasive infection which required a major chest surgery. This was going to make the double lung transplant substantially more difficult," said surgeon Dr. Samuel Kim, who assisted Dr. Bharat during the complex procedure. "When we opened the chest cavity there was a lot of evidence of infection; everything we touched or dissected started bleeding."

Just one day after surgery, Kuhns was off the ventilator and continues to recover.

"Everything happened so quickly. One minute I'm running my business, and the next minute I'm spending 100 days on a life support machine," Kuhns said. "If my story can teach you one thing, it's that COVID-19 isn't a joke. Please take this seriously."

Northwestern is not the only hospital in the United States to perform a double lung transplant: Physicians at the University of Florida's Shands Hospital in Gainesville have performed the lifesaving procedure on a Texas man in his 50s who fell ill with severe COVID-19 in April. After 33 days at Shands and more than three months on ECMO, the patient has now been removed from ECMO and is recovering steadily, his doctors said.

"This treatment brings much-needed hope that other selected patients struggling with coronavirus or its aftereffects can have a second chance," said Dr. Tiago Machuca, chief of Shands' division of thoracic surgery and surgical director of the hospital's lung transplant program.

Still, "a lung [transplant](#) is a major, complex surgery, and the aftermath requires the patient to make lifestyle changes," Machuca said in a Shands news release. "You need to be sure that this kind of a procedure is not just the patient's only option, but their best option."

More information: Visit the [U.S. Centers for Disease Control and Prevention](#) for more on coronavirus.

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