

500th Patient receives Berlin Heart EXCOR Pediatric Ventricular Assist Device

The 500th patient was supported with the Berlin Heart EXCOR® Pediatric Ventricular Assist Device (VAD) since the first implantation of the device in 1990. The patient, an 11-month-old girl, received the device at the Children's Memorial Hospital in Chicago and has been successfully transplanted in the meantime.



Alejandra, the 500th EXCOR Pediatric patient

Alejandra had been diagnosed a few weeks after birth with left ventricular non compaction and dilative cardiomyopathy, a disease that causes the heart muscle to enlarge and weaken. From six months of age, she received medications for her heart disease, but as she progressively worsened, she had to be placed on the waiting list for a donor heart. She presented to Dr. Elfriede Pahl, medical director of heart transplantation at Children's Memorial Hospital, with a respiratory infection and required mechanical ventilation.

Alejandra was placed on ECMO, a modified version of a heart-lung machine, on 2 January 2009, but rapidly deteriorated. "She was difficult to support on ECMO with a good deal of bleeding and relatively poor systemic perfusion", recalls Dr. Jeffrey Gossett, Alejandra's cardiologist. "As a result we needed to continue paralysis and were unable to feed her well."

By the time she received the Berlin Heart EXCOR Pediatric VAD, she had spent 38 days on mechanical ventilation and three days on ECMO. Alejandra's mother recalls, "We were devastated and very anxious. We had to hope for a miracle to help Alejandra"

On 5 January 2009, Dr. Sunjay Kaushal implanted a biventricular assist device. Dr. Kaushal recalls, "The implantation went as planned with excellent support in pre-, intra, and post-operative times. Berlin Heart provides great support especially in the postoperative period. In particular, our nurses had high anxiety regarding the Berlin Heart pump, but due to the extensive training by the Berlin Heart team, all the members of the team felt very comfortable in taking care of our patient, a superb job by the Berlin Heart team."



The Children's Memorial Berlin Heart Team – Jeffrey Gossett, Sunjay Kaushal, Carl Backer

Alejandra's mother recalls her thoughts when she first learned about the VAD, "For us, it was a hope. It was something to extend Alejandra's life. While she was on the Berlin Heart she was going to be able to live until a new heart did arrive. And there was not going to be any risk to the other organs. She was going to be able to grow and be strong like any other child."



Alejandra with her mother and her brother after the transplant

After the Berlin Heart EXCOR Pediatric implantation Alejandra's perfusion rapidly improved and the paralysis was lifted. She rapidly restarted feeds and for the first time in many weeks tolerated her feeding. Jeffrey Gossett says, "Due to her underlying skeletal myopathy we were not able to extubate her before her transplant occurred. She had made significant strides in improved organ perfusion while on the device that helped optimize her for transplantation."

After eleven days of EXCOR Pediatric support without complications, a matching donor heart was found and Alejandra was transplanted. Immediately after the transplant she required ECMO to support her new heart. After one week of support, her heart function recovered and since then she has made slow but steady progress.

Due to the long time Alejandra spent on the ventilator and due to her underlying skeletal myopathy, progression to extubation was slow and she required support by mechanical ventilation. She is now out of the ICU, growing steadily, and doing very well. Her doctors plan to discharge her within the next few weeks.

Alejandra's mother says, "We have been in the hospital for five and a half months now and we are hoping to go home soon! This experience has been so great. I have received so much support from the nurses and doctors. They have been there through many changes and have been able to keep Alejandra on track. Our hope for her is to have a quality life, to have a very prolonged life and to do all the activities as any normal child. As a family, we will support her through all challenges to come."



Alejandra with her grandfather after the transplant

Dr. Johannes Mueller, General Manager of Berlin Heart, says about the 500th EXCOR Pediatric implant: "Our ventricular assist devices play a crucial role in the successful treatment of end-stage heart failure patients. With the 500th implant of our pediatric ventricular assist device we have reached an important milestone. The number shows how high the worldwide demand is and how many pediatric patients depend on our products."