

St. Michael's North America first to use novel blood-cleaning procedure for kidney transplant

26 July 2011

St. Michael's Hospital today became the first in North America to use a novel blood-cleaning procedure for a kidney patient that will allow him to receive a transplant from a donor with a different blood type.

Transplants involving a donor and recipient with different blood types are rare. Most people have natural antibodies in their blood that would cause their [immune system](#) to reject an organ from someone with a different [blood type](#).

The procedure used today is called plasmapheresis and is similar to [kidney dialysis](#), which removes waste products from the blood. Plasmapheresis separates plasma from patient's blood, and runs it through a column-shaped device containing synthetic [carbohydrate](#) beads that trap the [blood group](#) antibodies. The "washed" plasma is then returned to the patient's body.

Andre Cossette, a Grade 4 teacher at Ange-Gabriel Elementary Catholic School in Mississauga, Ont., has been on dialysis for three years. He is scheduled to receive a kidney transplant from his brother, who has Type AB blood, on Aug. 11. Cossette has Type A blood and antibodies against Type B.

"If this procedure works, I get to get my brother's kidney," Cossette said, shortly after beginning the procedure, which was expected to last two to four hours. "I won't have to be on a waiting list, waiting for a call to come to the hospital within four hours because there may be a kidney available."

The procedure may need to be repeated a few times to get rid of all the antibodies. The patient will also receive medications to prevent his immune system from making more antibodies and attacking the transplanted kidney.

Dr. Jeff Zaltzman, director of the hospital's kidney transplant program, said the procedure could expand the number of living organ donors. More than one-third of potential live donors are turned down because their blood types are not compatible with the person to whom they wish to donate their kidney.

"Every time you have a living donor, you're helping someone who would otherwise be on a transplant waiting list for a long time," Dr. Zaltzman said. "That's also one more person who is not taking an organ from a deceased donor, which could then be given to someone else."

In Ontario, 1,075 people are on a [waiting list](#) for a [kidney transplant](#), according to the Trillium Gift of Life Network, the province's organ and tissue donation agency.

The device used today at St. Michael's, known as the Glycosorb ABO, was developed by Glycorex Transplantation, a Swedish company, and approved by Health Canada last year. It has been used once in Canada for a recent heart transplant in Alberta, but this is the first time for a kidney patient. The device is used in 21 countries, mainly in Europe, for kidney, liver, heart, lung and stem cell [transplants](#).

Provided by St. Michael's Hospital

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