

May 28, 2015

Follow AHS_Media & UAlberta_FOMD on Twitter 

Leading-edge diabetes treatment program hits milestone

EDMONTON – The local global leading islet cell transplant team recently performed its 500th islet cell transplant, which helps people with Type 1 diabetes control their blood glucose levels without daily insulin injections.

“No other program has accomplished anything of this magnitude,” says Dr. James Shapiro, Canada Research Chair in Regenerative Medicine and Transplantation Surgery, and Director of the Clinical Islet Transplant Program. “The University of Alberta and Alberta Health Services are international leaders in the treatment of diabetes because of this program.”

The Edmonton Protocol, developed by Dr. Shapiro and his team at the Faculty of Medicine & Dentistry, involves isolating islet cells from a donated pancreas and transplanting them via non-surgical injection into the liver of an insulin-dependent recipient with severe Type 1 diabetes.

The donor islet cells produce insulin which helps the transplant recipient regain control of their blood sugar levels, eliminating or greatly reducing the need for insulin injections.

Recipients typically undergo one or two transplants, and most patients experience a dramatic decrease in insulin requirement one month after a transplant.

“The Edmonton Protocol is an outstanding example of how Alberta-based research is improving the lives of patients here in the province and around the world,” says Sarah Hoffman, Minister of Health. “I congratulate Dr. Shapiro’s team on the milestone and look forward to hearing about their further advancements in the battle against this chronic disease.”

About 225 patients have undergone one or more transplants since AHS and the faculty established the program in 1999. Most of these patients have been able to stop insulin therapy for sustained periods, about half remain insulin-free long term, and many others require small amounts of insulin to keep their blood sugar under control.

“Dr. Shapiro’s research involving islet transplantation at the University of Alberta has been nothing short of remarkable,” says Richard Fedorak, interim dean of the Faculty of Medicine & Dentistry.

“His expertise in establishing the Edmonton Protocol and his continual efforts to improve upon it are giving hope to patients with Type 1 diabetes around the world. It’s with pride I can say that hope is being rewarded, as demonstrated through important milestones such as this.”

To be eligible for treatment, patients must be 18 years of age or older with difficult-to-manage Type 1 diabetes, requiring multiple insulin injections every day. Most patients who’ve undergone the treatment had experienced blackouts due to poor blood sugar control.

Follow AHS_Media & UAlberta_FOMD on Twitter 

Verlyn Olson, 61, was first diagnosed with Type 1 diabetes when he was 28 years old. Last fall, he was injured as a result of undetected low blood sugar, an episode he describes as a wakeup call. This year, he has undergone two islet cell transplants and today he is insulin free.

“I had been on an insulin pump for about three and a half years, but I was having a hard time identifying my lows,” says Olson, a former minister with the Government of Alberta. “I was setting an alarm in the middle of the night to check my sugars.”

He says the Edmonton Protocol has restored freedom.

“I still feel weak from the anti-rejection medication but it is a small price to pay for the feeling of freedom and the control I have now,” he says.

Dr. Shapiro and his team continue to innovate. For the 500th transplant, they collaborated with the University of Pittsburgh in a pilot clinical research trial, which involved transplanting the cells under the lining of the stomach rather than in the liver. The patient, an Edmonton man, was the first in the world to receive islets injected into the stomach; the new approach enables physicians to see and biopsy the cells following transplant.

“The treatment we can offer patients today is a very good treatment but it’s not a cure,” says Dr. Shapiro. “There is always room for improvement and we need to work hard in the lab and continue to make progress. Our team’s goal is to drive research today to accelerate a cure for tomorrow.”

The Faculty of Medicine & Dentistry at the University of Alberta is a leader in educating and training exceptional practitioners and researchers of the highest international standards. The faculty’s mission is to advance health through excellence in teaching, research and patient care. It is home to one of the top 100 ranked medical schools in the world.

Alberta Health Services is the provincial health authority responsible for planning and delivering health supports and services for more than four million adults and children living in Alberta. Its mission is to provide a patient-focused, quality health care system that is accessible and sustainable for all Albertans.

- 30 -

For media inquiries, contact:

Sharman Hnatiuk
AHS Communications
780-863-0629

Ross Neitz
University of Alberta, Faculty of Medicine & Dentistry
780-297-8354

B-roll and photos available

Site: <ftp://208.118.126.84/>

Username: media

Password: share (file named 500th islet cell transplant)