

First Canadian Face Transplant performed at Hôpital Maisonneuve-Rosemont in Montreal, Quebec

Montréal, September 12, 2018 – In what constitutes a **first in Canada**, a team of surgeons from the Hôpital Maisonneuve-Rosemont (CIUSSS de l'Est-de-l'Île-de-Montréal), led by the distinguished plastic surgeon Dr. Daniel Borsuk (also University of Montréal), have announced that they have successfully completed **a face transplant**. The operation was carried out in collaboration with Transplant Québec in May 2018 at the Hôpital Maisonneuve-Rosemont on a disfigured 64-year-old man, the **world's oldest recipient of a face transplant**. The operation, which lasted 30 hours, required the expertise of multiple specialists, and the exceptional collaboration of more than one hundred professionals, including doctors, nurses, and many other personnel. The transplant was made possible by means of an organ donation thanks to the work of Transplant Québec, along with the permission and incredible empathy of the donor's family.

“This delicate operation is the result of years of concerted, meticulous work by an incredible team and the incredible bravery and cooperation of the patient and his family. Through the combination of science, technology, engineering and art we attempted to build on the knowledge and experience of the pioneers in the field to perform the best facial transplant possible for our patient. said Dr. Borsuk, who also teaches at the Université de Montréal.

Four months after the procedure, the transplant recipient is doing well. He has fully recovered the ability to breathe without a tracheostomy, and has begun to chew with his new jaws, smell through his new nose, and speak with his new lips. Seven years ago, the man was severely disfigured by an accidental gun shot. Since then, he has been living in constant pain and experienced a poor quality of life, despite the five reconstructive surgeries he underwent. The face transplant offered the patient the only option to restore his two jaws, facial muscles and nerves, teeth, lips, and nose.

“The CIUSSS is proud to have reconstructive surgery excellence within its walls, a discipline which gives the hope of returning to a normal life to many patients,” said Yvan Gendron, CIUSSS-EMTL President and CEO.

The patient had to live with a tracheostomy (opening in the trachea). His ability to breathe, sleep, eat and speak were highly compromised. Moreover, social interactions and public

appearances proved to be challenging and resulted in the patient choosing to remain indoors and isolated. This natural extrovert had hoped for years to be able to once again have a normal life and be in contact with others.

The team behind the face transplant

It took the unrelenting work of an entire team to achieve this medical and scientific feat, unprecedented in Canada. The surgical team was comprised of nine surgeons:

In plastic surgery, Dr. Daniel Borsuk, Dr. André Chollet, Dr. Dominique Tremblay, Dr. Jenny Lin, Dr. Charles Guertin and Dr. Michelle Tardif; in ENT, Dr. Tareck Ayad and Dr. Akram Rahal; and in maxillofacial surgery, Dr. Jean Poirier.

A family's generosity, Transplant Québec's crucial role

The medical expertise of this achievement is only one of the elements that contributed to its success. Many partners must also be acknowledged for their contribution to this immense undertaking. First and foremost, the team would like to sincerely thank the **donor and his family**, who, thanks to their generosity, gave a man a chance at a more normal life.

"As a plastic surgeon, I know that, no matter large or small, injuries to the face have a particularly symbolic aspect and are closely linked to our identity. Facial disfigurement can have a detrimental effect on self-confidence and productivity, and therefore, this transplant offered immense hope and possibility to our patient." said Dr. Borsuk, who also wanted to thank **Transplant Québec, a valued partner throughout the process.**

"Transplant Québec is very pleased with the success of this, the first face transplant in Quebec and Canada, made possible through organ donation. We would like to acknowledge the donor family, who showed great empathy and generosity in accepting that their loved one donate his face and his organs. The tremendous collaboration between Dr. Borsuk's team and Transplant Québec's is one of the keys to the success of this first, which was so beneficial for the receiver. The innovative character of this transplant is proof of the professional maturity of Transplant Québec and its health institutions in Quebec, which are valued partners," declared Mr. Louis Beaulieu, Managing Director, Transplant Québec.

Other important partners involved in the face transplant include Johnson and Johnson, which provided free medical equipment, including instruments and surgical products.

A lengthy preparation for the team and the patient

Such a surgery requires not months, but years of meticulous preparation, for both the surgeons, who honed their expertise beforehand, and the patient, who underwent many in-depth physical and psychological examinations and procedures. This type of surgery also requires significant ethical and logistic preparation on the donation side, as well as having to deal with consent issues with the donor's family.

"We wanted to ensure that the recipient would take on what was going to be a major change in his existence in the best physical possible health, armed with all the necessary

information and psychological support,” said Dr. Borsuk. He added, “We will continue to support the patient so he can completely adapt to his life post surgery.”

Face transplant milestones

This complex procedure remains extremely rare globally. Since 2005, some forty face transplants have been performed around the world. The transplant done by Dr. Borsuk and his associates at Hôpital Maisonneuve-Rosemont is not only the country’s first, but also a first for Commonwealth countries. Despite the complexity of the procedure and rehabilitation, the procedure is in fact relatively inexpensive for the public system, when compared to the multiple surgeries that would have been required to attempt to reconstruct this type of injury. More fundamentally however, it makes it possible for the individuals who undergo facial vascularized composite allotransplantation to enjoy a more productive and normal life.

Hôpital Maisonneuve-Rosemont’s expertise

The establishment offers the only multidisciplinary adult cranio-maxillofacial surgical team in the province. The team specializes in complex reconstructions of the face and neck. With extensive experience in transplants, the Hôpital Maisonneuve-Rosemont is also an international leader in hematology and research in transplants and the immune system, cellular therapy, ophthalmology and nephrology.

An experienced plastic surgeon

Dr. Borsuk brought all of his experience as a pioneer in facial reconstruction to this surgery. He already became a part of facial reconstruction history by being the only Canadian doctor on an American face transplant team who operated on a 37-year-old man disfigured by a gunshot wound in 2012. More recently, in an eight-hour surgery on an adult patient at the Hôpital Maisonneuve-Rosemont, Dr. Borsuk’s team performed a facial reconstruction with virtual surgery techniques and 3D models. They also removed a piece of vascularized pelvic bone and sculpted it to use on the face, then transplanted it by the interior of the mouth, so as not to leave any scars on the face. Dr. Borsuk is also recognized for his work with children injured by dog bites.

Dr. Borsuk obtained his B.Sc., MBA and M.D. from McGill University before pursuing his training in plastic and reconstructive surgery at the Université de Montréal. Subsequently, he completed a sub-speciality in cranio-maxillo-facial surgery and adult and pediatric micro-surgery at Johns Hopkins University and at the R. Adams Cowley Shock Trauma Center in Baltimore, Maryland, under the direction of Dr. Edouardo Rodriguez, one of the pioneers in face transplants.

A detailed documentary about the entire procedure was produced by the science program Découverte (Radio-Canada). It will air on the September 16th (6 :30 PM) on ICI Radio-Canada Télé and at 8 pm on ICI RDI.

About the CIUSSS de l'Est-de-l'Île-de-Montréal

The Centre intégré universitaire de santé et de services sociaux de l'Est-de-l'Île-de-Montréal (CIUSSS-Est) includes the Hôpital Maisonneuve-Rosemont, the Hôpital Santa Cabrini Ospedale, the CHSLD polonais Marie-Curie-Sklodowska and the Institut universitaire en santé mentale de Montréal, as well as the health and social services centres in Saint-Léonard, Saint-Michel, the Pointe-de-l'Île and Lucille-Teasdale. It has some 15,000 employees and close to 1,000 doctors (FTE) in 43 points of service for a population of 500,000. It offers a full range of primary health care and social services, general, specialized and super-specialized hospital care, as well as mental health care. It also offers long-term care facilities. Affiliated with Université de Montréal, the CIUSSS-Est combines the missions of teaching, evaluation and research with the training of doctors and other health professionals. Its two major research centres are recognized at the national and international levels for their expertise in mental health, immune-oncology, vision health, nephrology and cell therapy. www.ciusss-estmtl.gouv.qc.ca

About Transplant Québec

Transplant Québec has a mandate from the Minister of Health and Social Services to save lives and improve the health of persons in need of a transplant by coordinating the organ donation process, ensuring the equitable allocation of organs, supporting best clinical practices through consensus-building and the mobilization of its partners, and promoting organ donation in the society at large. Transplant Québec therefore works to ensure that the greatest possible number of Quebecers waiting for an organ can benefit from a transplant in as timely a fashion as practicable. <https://www.transplantquebec.ca/en>

For information and interviews

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