Kidney And Pancreas Transplantation Program At Hospital Italiano De Buenos Aires, Argentina

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HOSPITAL ITALIANO DE BUENOS AIRES

The Hospital Italiano de Buenos Aires, founded in 1853, is a health center which offers care in over 40 medical specialties and features the country’s most complete diagnosis and treatment equipment. The Hospital’s health insurance system has over 150,000 members, who receive medical care at all stages of life. Its two hospital network has an inpatient capacity of 750 beds, as well as 23 outpatient Medical Centers located in strategic points of the City of Buenos Aires and its surrounding suburbs.

A fully implemented web-based system, permanently available to the hospital's professional staff, manages clinical records, medical data, diagnostic imaging and drug prescriptions.

The Hospital offers over 30 residency programs and 34 fellowship programs. Last year, over 1,400 candidates applied for the 70 positions in the residency program.

The University Institute of the Hospital Italiano has a School of Medicine and a School of Nursing. Its learning process is enriched by the high level of activity which takes place at the Hospital. It also offers more than 60 on site or distance learning postgraduate courses, through its Virtual Campus.

The Basic Research and Experimental Medicine Institute is committed to developing technologies and knowledge for later use in patient care. In addition to advancing research on regenerative medicine, cellular transplants and stem cells, the Institute created the Molecular and Genomic Medicine Unit, a valuable biotechnological project aimed at improving diagnosis of illnesses and establishing personalized treatments for each patient. Some of its most important research projects include: pharmaco-genomics, neurobiology, onco-immunology, experimental fetal medicine, pancreatic islet glycoimmunology and pig liver cells.

History of Hospital Italiano transplants

- 1948, Bone transplant (first time in Argentina)
- 1965, Kidney transplant (second time in Argentina)
- 1968, Liver transplant (first time in Argentina)
- 1988, Adult heart transplant
- 1990, Pediatric heart transplant
- 1992, Lung transplant (first time in Argentina)
- 1994, Simultaneous pancreas-kidney transplant (first time in Argentina)
- 1995, Islet transplant (first time in Argentina)
- 1996, Pediatric bone marrow transplant
- 1999, Small bowel transplant (first time in Argentina)
- 2001, Bio-artificial liver support (first time in Argentina)
- 2001, Bloodless surgery liver transplant (first time in Argentina)
- 2003, Adult bone marrow transplant
- 2005, Heart-lung transplant for restrictive cardiomyopathy (first time in Argentina)
- 2006, Reduced liver transplant (first time in the world)
- 2009, Pediatric multivisceral transplant

PANCREAS TRANSPLANTATION - HISTORICAL PERSPECTIVES

Pancreas transplantation has a long tradition of experimental research and clinical activity in our hospital. In the 60’s a team led by Dr. Enrique Beveraggi worked in an experimental model that was also being developed in the U.S.A. by Richard C. Lillehei and colleagues at the University of Minnesota. Although they did not go into clinical application, the groundwork for future experimental work and assistance were laid. In the 80’s, a pilot project for future clinical applications was undertaken by Dr. Eduardo de Santibañes and Dr. Ruben Gutman. The experimental model carried out had been learned during de Santibañes’ stay with Dr. David E. R. Sutherland in Minnesota, and...
with Dr. Thomas Starzl in Pittsburgh. This project was the direct predecessor of the current clinical pancreas transplantation program at our hospital. In the 90’s, the Minnesota surgical procedure, together with the use of immunosuppression continued its development on animal models in the Experimental Medicine Unit under the direction of Dr. Pablo Argibay. After an intensive pilot training, a pancreas transplant group was created with the intention to move to the clinical stage. Dr. Argibay left for Iowa, to work with Dr. Robert Corry, who had developed a model of duodenum-pancreas transplantation with bladder drainage, which was used as the preferred procedure for nearly a decade around the world. From the Nephrology Service, Dr. Rosanna Groppa departed to Barcelona, to work with Dr. L. Fernandez Cruz. From Endocrinology, Dr. Leon Litwak left to Iowa. Subsequently, this group was joined by Dr. Juan Pekolj, who had trained in Omaha, Dr. Osvaldo Campi, also trained in Omaha, and Dr. Sung Ho Hyon, who trained in pancreas and islet transplantation at Northwestern University, in Chicago, with Dixon B. Kaufman. The group responsible for conducting the first clinical transplant was finally established by Drs. Pablo Argibay (Surgery), Juan Pekolj (Surgery), Juan Matera (Surgery) Salomon Algranati (Nephrology, Head of Kidney Transplant), Rosanna Groppa (Nephrology), Leon Litwak (Endocrinology), Luis Grosembacher (Endocrinology), Carlos Giudice (Urology), Alberto Domenech (Cardiovascular Surgery) and Laura Barcan (Infectious Diseases). The Anesthesiology Service and the Intensive Care Unit were both committed to the project. The Nursing Department, especially Ms. Ines Abate, and the hospital as a whole participated in one way or another in this project. Finally, on October 25, 1994, the first simultaneous pancreas-kidney transplant was done at the Hospital Italiano de Buenos Aires. The following year, the first simultaneous islet-kidney transplant was performed, and one year later, the first islet-after-kidney transplant was done in a patient whose pancreas failed after a simultaneous pancreas-kidney transplant received in France. All these three procedures had been performed for the first time in Argentina.

**CURRENT DATA**

The Program offers simultaneous pancreas-kidney (in type 1 and type 2 diabetes with end stage renal disease), pancreas after kidney and pancreas alone transplants.

As of December 2010, we have performed 98 simultaneous pancreas and kidney transplants, and 27 pancreatic islet transplants, with a recent rate of 15 procedures annually.

The patient, pancreas and kidney survival rates at 1 year are 91%, 85% and 88%, respectively; and at 5 years, 87%, 76%, and 79%, respectively. Patient immediate (3-month) survival rate is 98.6%.

**RESEARCH INTEREST**

The Islet Laboratory conducts research on the role of islet surface sugars as molecules influencing immune reaction after transplantation. More specifically, the role of sialic acid on peritoneal macrophage response. Additionally, a line of investigation is focused in studying factors determining mesenchymal stem cell differentiation to insulin producing cells.

**CURRENT STAFF**


**Photograph footnote:**

First pancreatic islet transplant team, performed on December 6, 1995 at Hospital Italiano de Buenos Aires: standing from left to right, Daniel Deluca, MD; Leon Litwak, MD; Pablo Argibay, MD; Sung Ho Hyon, MD; Rosanna Groppa, MD; Karina Rodriguez, scrub nurse; and Luis Grosembacher, MD. Sitting, scrub nurses Carola Perfetto, Patricia Chavarria, Rosina Mailland, and Ruth Chavarria.