



1725 I Street NW • Suite 510 • Washington, DC 20006
Tel 202-659-0599 • Fax 202-659-0709 • www.asn-online.org

Contact: Shari Leventhal: 202-416-0658, sleventhal@asn-online.org (before Oct. 27)
October 27–28: ASN Management Office, America’s Center, Room 130, (314) 342-5511
Friday, Oct. 29 – Monday, Nov. 1: ASN Media Room, America’s Center, Room 250,
(314) 342-5508 (media room), 202-236-8142 (after hours)

ASN CELEBRATES 50TH ANNIVERSARY OF FIRST KIDNEY TRANSPLANT

Transplant experts reflect on major advances and look ahead to the future of transplants

St. Louis, MO (October 30, 2004)— At an upcoming news briefing, kidney transplant experts will mark the 50th anniversary of the first kidney transplant by honoring the major advances in kidney transplantation that have saved the lives of more than 146,669¹ people in the United States suffering from kidney failure. The briefing will take place from 12:15 – 1:15 p.m. on Saturday, October 30 at the American Society of Nephrology’s 37th Annual Meeting and Scientific Exposition in Room 251 of the America’s Center, St. Louis, Missouri.

“We have truly come a long way over the last 50 years but have yet to perfect a way to make all recipients fully tolerant to the donated organ. I feel confident that ongoing research will assist us in successfully transplanting more and more patients suffering from chronic renal failure,” says early transplant pioneer, Charles Bernie Carpenter, MD, Co-director, Tissue Typing Lab at the Brigham and Women’s Hospital, Director of the Immunogenetics Laboratory, and Professor of Medicine at Harvard University Medical School. Dr. Carpenter will receive ASN’s prestigious John P. Peter’s Award at the ASN Annual Meeting for making substantial contributions to the field of nephrology.

He studied under the leadership of Dr. Joseph Murray, who headed the team in 1954 that performed the first successful kidney transplant in humans at Peter Bent Brigham Hospital, now Brigham and Women’s Hospital in Boston, Massachusetts. Since the donor and its recipients were identical twins, the donated kidney did not appear foreign and was therefore not rejected.

“We have gone from transplanting identical twins in 1954 to now performing transplants on patients, such as the elderly and those with hepatitis C; we had never thought would be possible” says transplant expert, J. Harold Helderman, MD, Medical Director at Vanderbilt University Medical Center, Nashville, Tennessee, who studied with Dr. Carpenter in the 1970’s.

¹ The ASN thanks The Organ Procurement and Transplantation Network for the statistical information that dates back to 1988; this statistical information does not take into account the number of kidney transplants that occurred prior to 1988.

MORE

History of Transplantation

The history of kidney transplantation can be divided into four distinct eras:

The Experimental Era - 1954-1962

Aside from kidney transplants in identical twins, organ and patient survival was dismal during this era. Nephrologists hadn't yet identified how to keep the kidney from being rejected other than with radiation from X-rays, which was ineffective.

The Imuran Era - 1963-1983

In 1963 the first immunosuppressive drug, Imuran, a derivative of a drug that had been formulated to fight leukemia, was approved by the FDA for use in kidney transplantation. When combined with corticosteroids, Imuran made possible the survival of 50% of deceased donor kidneys at the one-year mark after transplantation, and only half of these were functioning 7 years later. During the next two decades, the one-year success rate had risen to 70%; however, the rate of graft loss over time had not improved.

The Cyclosporine Era – 1984-1995

The FDA approval of the more effective immunosuppressant, cyclosporine, in 1984 was a great milestone in transplant history in that it both expanded the number of candidates eligible for a kidney transplant and extended the life of the transplanted organ and its recipients. Acute rejection episodes of the donor kidney fell from 95% to about 50%, while graft survival after the first year of transplantation rose to 85%. For the first time, transplantations could be offered to other organs, such as the heart and liver.

The Designer Era – 1996-present

Since the use of cyclosporine, there has been an explosion of new immunosuppressant drugs that has allowed transplant experts to create a treatment plan designed for each individual. As immunosuppressive drugs have improved, so has the number of potential recipients who can receive kidneys, as well as an increase in acceptable donors. Transplant experts are currently investigating new ways to improve the long-term outcomes of transplanted kidneys and their recipients. Although short-term transplant outcomes are excellent, with graft and patient survival rate at one year more than 90%, only about 50% are still functional ten years after transplantation.

Looking to the Future

The transplant community continues to search for the “Holy Grail” of transplantation -- immunological tolerance - - the ability to transplant an organ without the use of immunosuppressive drugs. Although animal models have suggested that immunological tolerance may be possible, there is no convincing evidence that it can be done in humans – at least not yet.

The ASN is a not-for-profit organization of 9,000 physicians and scientists dedicated to the study of nephrology and committed to providing a forum for the promulgation of information regarding the latest research and clinical findings on kidney diseases. ASN's Renal Week 2004, the largest nephrology meeting of its kind, will provide a forum for more than 12,000 nephrologists to discuss the latest findings in renal research and engage in educational sessions relating advances in the care of patients with kidney and related disorders from October 27- November 1, 2004 at the America's Center in St. Louis, Missouri.

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