News

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Industry Articles

Double hand transplant patient: 'I wrote a thank-you letter to my surgeon' (April 2017)

Tess de la Mare and agencies

Thursday 6 April 2017 14.16 EDT

The first person in the UK to undergo a double hand transplant has said writing a letter to thank his surgeon has been one the highlights of his first nine months since the operation – that, and being able to applaud his favourite rugby league team.

Chris King, 57, described how he had got his life back since the surgery last July, when he became the second person to have a hand transplant at the UK's specialist centre for the operation at Leeds General Infirmary (LGI) and the first to have both hands replaced.

King, from Rossington near Doncaster, said he can now do a range of tasks, including writing, making tea and gardening, as he progresses faster than his surgeon anticipated. He said he was improving every week and that his next aims were to tie his shoelaces and button up his shirt (he has already cracked undoing them).

Looking at his hands, King said: "They are my boys, they really are. It's been going fantastically. I can make a fist, I can hold a pen, I can do more or less the same functions as I could with my original hands. There are still limitations, but I'm getting back to the full Chris again."

King has also discovered that he is now ambidextrous. "When I picked a pen up first time, it was with my right hand," he said. "The next time I picked it up, it was left. I might be able to write with both hands now." He said: "I think it will be the icing on the cake when I can do my laces, and I don't think that's far off."

To view the full article, please click on this link:

https://www.theguardian.com/society/2017/apr/06/uks-first-double-hand-transplant-patient-delights-in-writing-letter-to-thank-surgeon

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Stem Cell Transplants Lead to Cure for Some Type 1 Diabetes Patients (April 2017)

March 1, 2017 | by Katie Neith

A recent clinical trial monitored by City of Hope's Bart Roep, Ph.D., showed promising results for a possible cure of type 1 diabetes (T1D). Although the study involved risky stem cell transplant procedures, it identified new paths for personalized therapies of T1D.

The trial, which was conducted in Brazil, enrolled 21 T1D patients who had received autologous hematopoietic stem cell transplantation (AHSCT), which involves the use of a person's own stem cells.

Participants were monitored and assessed every six months. Most patients became insulin free for an average of 3.5 years after transplantation. C-peptide levels — which show how much insulin is being made by the pancreas — remained higher than initial values for at least four years post-AHSCT, indicating temporary immunological balance and preservation of insulin-secreting beta cells. Loss of beta cells is what causes T1D and the symptoms associated with the disease.

"This means we can cure type 1 diabetes, be it with a risky therapy — although one that is also very successful in cancer, and one for which City of Hope is a world-renowned expert, with more than 14,000 patients having received similar treatment for blood cancers," said Roep, the Chan Soon-Shiong Shapiro Distinguished Chair in Diabetes and professor and founding chair of the Department of Diabetes Immunology.

To view the full article, please click on this link:

https://www.cityofhope.org/stem-cell-transplants-a-cure-for-some-type-1-diabetes-patients?utm_source=Convio&utm_medium=email&utm_content=20170404&utm_campaign=eHope

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Kidney Waitlist Management: The Readiness Model of Predicting Transplants Under Kidney Allocation System (April 2017)

N. Elias, B. Kimball, L. Walsh, D. Wojciechowski, J. Markmann, E. Heher.

Transplant Center, Massachusetts General Hospital, Boston, MA

***Meeting**: 2017 American Transplant Congress*
***Abstract number**: D289*

Based on the Organ Procurement and Transplantation Network data, between 2001 and 2016 the national kidney wait-list has grown from 51,271 to 100,791 (97%). At the Massachusetts General Hospital (MGH) our kidney wait-list has grown by 257% over the same period. Also evident by 1 and 2 year transplant percentage figures, national waiting times have increased significantly with Region 1 (New England) showing an even greater increase. Over the same 15 year period, this resulted in a 97% rise in waiting list removals due to death or being too sick for transplant nationally, compared to 153% rise at MGH.

Pre-transplant associated charges are the sum of initial evaluation and waitlist maintenance charges. To minimize those, we developed a prediction model using methodology based on the newly implemented Kidney Allocation System (KAS), specifically its classifications and allocation points. We also factored in patients with shorter waiting time, e.g. eligible for Hepatitis C positive donor kidneys. With a growing waiting list of >750 patients, and annual transplant volume of only 125, the model predicted with 85% accuracy patients who received a deceased donor kidney transplant within one year. The majority of the 15% unpredicted transplants were 0-ABDR mismatch kidneys which could not be accounted for. Our model included a collaboration system which enabled the performance of required additional testing at the time of admission for transplant.

To view the full article, please click on this link:

http://atcmeetingabstracts.com/abstract/kidney-waitlist-management-the-readiness-model-of-predicting-transplants-under-the-kidney-allocation-system/

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Vascularized Composite Allograft Preservation: Ubi Sumus (April 2017)

Gorantla, Vijay S. MD, PhD, FRCS; Davis, Michael R. MD

Transplantation: March 2017 – Volume 101 – Issue 3 – p 469-470
doi: 10.1097/TP.0000000000001599

Autologous reconstruction of devastating injuries is often fraught with insuperable impediments. Life-changing esthetic and functional restoration of massive tissue defects is a reality today with vascularized composite allotransplantation (VCA). Since 1998, over 115 upper extremities and 35 craniomaxillofacial VCA have been performed worldwide. Per latest United Network of Organ Sharing data, there are 59 approved VCA programs located at 26 centers (including civilian, military or veterans affairs–affiliated institutions) across the nation.1

Despite its clinical promise, the risks of lifelong immunosuppression, demands of functional nerve regeneration, and specter of chronic rejection continue to curb the potential impact of VCA as a paradigm shift for reconstructive surgery.

In addition to pioneering the art of vascular anastomoses, Alexis Carrell coinvented (with Charles Lindbergh), techniques for ex vivo organ perfusion with oxygenated solutions at body temperature.2 These century-old groundbreaking achievements were seminal to the inception and progress of not only solid organ transplantation (SOT) and reconstructive surgery, but also of VCA.

Yet, the ideal organ preservation technology remains an elusive target.

The logistic simplicity and presumed effectiveness of static cold storage (SCS) preservation (at 4°C) drives its widespread use in SOT and VCA.3 SCS leads to anaerobic metabolism with loss of cell membrane integrity, reduced interstitial osmotic pressure (causing tissue edema and acidosis), and mitochondrial injury with cell death. Importantly, SCS also causes perivascular, intramuscular and intramyelinic edema, and axonal vacuolization.

Unique from any other solid organ, VCA outcomes depend on functional neuroregeneration and target muscle reinnervation. As in SCS, both muscular (beyond 4 hours) and neural (beyond 6 hours) tissues experience irreversible deterioration after warm ischemia. Ischemia-reperfusion injury (IRI) has a profound proinflammatory impact on the graft, through formation of reactive oxygen species and activation of innate, adaptive, and complement pathways, compounding the deleterious effects of SCS and warm ischemia and increasing risks of acute and chronic rejection.4

To view the full article, please click on this link:

http://journals.lww.com/transplantjournal/Fulltext/2017/03000/Vascularized_Composite_Allograft_Preservation__.9.aspx

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Advances in Bridging Children to Heart Transplant (March 2017)

March 2017

For many years, infants and small children who were waiting for a heart transplant faced the highest risk of death in transplantation medicine. The lack of reliable small ventricular assist devices (VADs) was a factor driving this risk. With only adult-sized VADs available in the United States, the options left to American pediatric clinicians were extracorporeal membrane oxygenation and the use of adult VADS, both of which delivered suboptimal results.

In late 2011, the FDA approved the EXCOR® Pediatric Ventricular Assist Device (VAD) (Berlin Heart AG, Berlin, Germany), giving clinicians a much more effective tool for successfully bridging infants and small children to heart transplant or recovery. Also known as the Berlin Heart, the EXCOR® Pediatric VAD is currently the only VAD approved in the United States for use in infants and small children.

The EXCOR® Pediatric VAD was first implanted in a University of Minnesota Masonic Children's Hospital patient in a 2008 clinical trial. Today the hospital is currently the only one in the Twin Cities metro area approved to implant the VAD into infants and small children. Rebecca Ameduri, MD, Medical Director of Pediatric Heart Failure and Transplant, and the hospital's Director of the Pediatric Device Innovation Consortium Gwenyth Fischer, MD, served as the site's principal investigators in the clinical trial.

In the trial, 204 children were enrolled across 47 study sites. At 12 months after implantation, 75% of participants remained alive. Of these, 64% survived to transplantation, 6% recovered (the device was explanted and the patient survived 30 days), and 5% were alive with the device in place. The mortality rate in the 12-month trial period was 25%. Strokes occurred in 29% of these patients, and stroke was the leading cause of death. To date, University of Minnesota Masonic Children's Hospital has implanted 26 of the VADs in small children as well as 2 HeartWare VADs and 2 HeartMate II left ventricular assist systems in adolescents. Outcomes for the 26 patients bridged by the EXCOR Pediatric VAD are similar to those in the clinical trial, Ameduri says. Of these patients, 65% have successfully bridged to transplantation, and 10% were weaned from the device. The mortality rate among these patients is 20%. "We also have much lower stroke rates than those reported in national studies," Ameduri says. "We feel this is because our hematology team keeps tight management over the anticoagulation medications."

To view the full article, please click on this link:

http://consult.mhealth.org/3-2-2017/advances-in-bridging-children-to-heart-transplant?utm_source=m_health_consult_newsletter&utm_campaign=pediatric_cardiac_transplant_march_2017&utm_medium=email&utm_source=M+Health+Consult+Newsletter&utm_campaign=db3a7c9cd5-EMAIL_CAMPAIGN_2017_03_03&utm_medium=email&utm_term=0_458d22411d-db3a7c9cd5-331578577

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Emory Transplant Center Performs Its First HIV to HIV Kidney Transplant (March 2017)

February 23, 2017, 12:20 pm

By admin

Made possible by the HIV Organ Policy Equity (HOPE) Act, Emory Transplant Center has performed its first HIV-positive kidney transplant from an HIV-positive deceased donor. Not only was this Emory's first HIV to HIV kidney transplant, it is also the first of its kind in Georgia and the first HIV to HIV positive kidney transplant in 2017.

Emory and eight other centers nationwide are taking part in the HOPE in Action clinical trial — a prospective, pilot study to evaluate the safety of HIV-positive deceased donor solid organ transplants (kidney and liver) in HIV-positive recipients.

Stable HIV-infected adults with end-stage kidney disease who meet study-specific HIV criteria for organ transplantation will be offered enrollment in the study at Emory. Currently, Emory is enrolling participants for HIV-positive to HIV-positive kidney transplants, with a plan to include liver transplant patients in the near future.

"With 120,000 people on the wait list for a kidney transplant, and about 10,000 people living with HIV who are on dialysis, the HOPE Act gives us new opportunities to save more lives, rather than turning down organ donations from HIV-positive donors," says Nicole Turgeon, MD, kidney transplant surgeon, Emory Kidney Transplant Program and principal investigator of this study at Emory.

"Patients living with HIV are living longer because their disease is now considered manageable with good antiretroviral therapies. This means we are seeing more patients who are HIV-positive in need of organ transplants. The HOPE Act ensures a greater number of people will receive the life-saving transplant they need," explains Turgeon.

The HOPE Act was enacted in November 2013, but did not become effective until November 2015. In 2016, 20 patients at four different centers received new organs in the HOPE in Action clinical trial. Research shows that HIV-positive transplant recipients have similar patient survival rates and kidney and liver graft survival rates post-transplant as non-HIV-positive recipients. This is good news for patients with HIV who need a transplant.

"We thank this donor and the donor's family for giving life to others during their time of sorrow, and the excellent work of Life Link of Georgia that made this transplant possible" says Turgeon. "We want to encourage others, with or without HIV, to register to be organ donors and to tell their families of their decision to help others. Go to Donate Life of Georgia to learn more."

To view the full article, please click on this link:

http://advancingyourhealth.org/transplant/2017/02/23/hiv-to-hiv-kidney-transplant/

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Virus-Specific T Cells Treat Posttransplant Infections (March 2017)

Banked T cells offer "off-the-shelf" therapy for patients with BK virus, JC virus, cytomegalovirus infections after stem cell transplant

March 2017: Virus-Specific T Cells Treat Posttransplant Infections

BY Joe Munch

A novel approach to adoptive T cell immunotherapy holds promise for some patients who develop acute, possibly deadly viral infections after undergoing allogeneic hematopoietic stem cell transplant (HSCT).

Physicians at The University of Texas MD Anderson Cancer Center are using T cells that target BK virus, JC virus, and cytomegalovirus (CMV) to successfully treat infections in HSCT patients. The T cells were developed in the institution's Good Manufacturing Practice and Cellular Therapy Facility by Katy Rezvani, M.D., Ph.D., and Elizabeth Shpall, M.D., both professors in the Department of Stem Cell Transplantation and Cellular Therapy.

"Viral infections are major causes of morbidity and mortality in HSCT patients," Dr. Rezvani said. "We're showing that we can immediately treat some of these potentially fatal infections with banked virus-specific T cells from healthy donors."

Potentially fatal infections

People with healthy immune systems may harbor BK virus, JC virus, or CMV and never experience symptoms of infection. But in people with extremely weakened immune systems—such as HSCT patients—these viruses can wreak havoc. The conditions resulting from these infections can be debilitating or even deadly, and conventional treatments to fight the infections are severely lacking. BK virus infection can cause BK hemorrhagic cystitis, which occurs in about 20% of all HSCT patients, depending on how high-risk the transplant is. BK hemorrhagic cystitis can be very painful, and patients with the condition may develop bladder hemorrhage and/or renal failure. For years, the standard of care has been limited to supportive measures, including analgesics, continuous bladder irrigation, hyperhydration, and forced diuresis.

To view the full article, please click on this link:

https://www.mdanderson.org/publications/oncolog/march-2017/virus-specific-t-cells-treat-posttransplant-infections.html?utm_source=Bronto+at+MD+Anderson&utm_medium=email&utm_term=Virus-Specific+T+Cells+Treat+Posttransplant+Infections&utm_content=jthies@lifetracnetwork.com&utm_campaign=OncoLog:+March+2017

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CKD Patients Have Higher Out-Of-Pocket Expenses in US Than Cancer, Study Shows (March 2017)

March 6, 2017

Magdalena Kegelby Magdalena Kegel In News.

U.S. patients with chronic kidney disease (CKD) who are not dependent on dialysis have high or higher out-of-pocket expenses than other costly diseases such as cancer and stroke.

In addition, researchers found that chronic kidney disease is also linked to much higher total direct healthcare expenditures than people not affected by the three diseases, demonstrating that kidney disease places a serious economic strain on patients.

The study, "Non-dialysis dependent chronic kidney disease is associated with high total and out-of-pocket healthcare expenditures," was published in the journal BMC Nephrology.

While the need for dialysis among kidney patients is known to be linked to substantial healthcare costs, researchers at Loyola University Chicago noted that high costs for healthcare is likely a problem starting before a patient becomes dependent on dialysis.

Many patients with chronic kidney disease also have other conditions which may drive costs up. Since cancer and stroke are among the costliest conditions among Medicare patients, the research team chose to compare chronic kidney disease (also rated a highly costly disease in Medicaid) to the two conditions, and also compared all three groups to people without any of the three health issues.

Researchers used data from the 2011–2013 Medical Expenditure Panel Survey. The survey held information about 52 chronic kidney disease patients, 870 cancer patients, and 1,104 stroke patients. The number of people in the survey without the three conditions was 72,241. All participants were age 21 or older.

To view the full article, please click on this link:

https://ckdnews.com/2017/03/06/chronic-kidney-disease-patients-have-higher-out-of-pocket-expenses-than-cancer/?utm_source=CKD+E-mail+List&utm_campaign=929afecd80-RSS_WEEKLY_EMAIL_CAMPAIGN&utm_medium=email&utm_term=0_ebc450dad8-929afecd80-72105397

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LVADs 'Relatively Low Value' in Cost Analysis The devices typically rack up $290k per QALY vs medical tx alone (March 2017)

Posted: 01/11/2017 Author: Nicole Lou Reporter, MedPage Today/CRTonline.org News2017

The high cost of getting a left ventricular assist device (LVAD) for advanced heart failure, compounded by expensive follow-up care, makes these devices a "relatively low value," researchers said.

LVAD implantation cost $175,420 for the procedure but carried a 6-year total price tag of $726,200, according to Jacqueline B. Shreibati, MD, MS, of Stanford University School of Medicine, Calif., and colleagues in a study published online in JACC: Heart Failure.

For destination therapy in ambulatory patients, LVAD therapy cost $209,400 per quality-adjusted life year gained (or $597,400 per life-year gained) relative to medical management alone.

For higher-risk patients with multiple comorbidities often considered LVAD ineligible, the incremental cost-effectiveness ratio was $171,000 per quality-adjusted life year gained, relative to medical management.

If readmission rates and outpatient costs could be halved after LVAD implantation, the relative price of therapy would drop to $86,900 per quality-adjusted life year gain for low-risk patients, the authors found.

"Across a spectrum of advanced heart failure patients, we found that the high frequency of readmissions and the high cost of outpatient care, over a longer period of survival, were the largest determinants of the relatively low value provided by LVAD therapy," Shreibati's group wrote.

"Based upon this analysis, multidisciplinary teams should focus upon reducing outpatient costs and rehospitalizations," concluded Joseph G. Rogers, MD, of Duke Clinical Research Institute in Durham, N.C., in an accompanying editorial, listing the challenges of both approaches.

"The costs of managing outpatients supported with mechanical blood pumps require careful examination, particularly the costs of durable medical equipment and supplies," Rogers wrote. "Future innovation that includes totally implantable systems may obviate the need for some of the supplies but will certainly be associated with higher upfront costs as well as yet undefined maintenance costs."

To view the full article, please click on this link:

http://www.crtonline.org/news-detail/lvads-relatively-low-value-in-cost-analysis-device

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