Living Kidney Donation

Dr. Joseph Keith Melancon
Thanks to our speaker!

Keith Melancon, MD

- Chief – Transplant Institute And Division Of Transplant Surgery; Medical Director – GW/ Ron And Joy Paul Kidney Center
- Dr. Melancon is a Professor of Surgery whose specialties include kidney, pancreas and liver transplantation, as well as laparoscopic kidney donor nephrectomy.
- His research interests have centered upon increasing access to health care for minority patients, particularly in the field of organ transplantation.
Scenario

**Room 1**
100 patients

- Present
- Hemodialysis
- ?

**Room 2**
100 patients

- Present
- Kidney Transplantation
- ?

10 years later
TRUE OR FALSE?

A living kidney donor will usually be in the hospital for about a week after surgery.

FALSE!

TRUTH:
A living kidney donor will be in the hospital for only 2 nights after surgery.
TRUE OR FALSE?

A living kidney donor will have to change their diet after donation.

FALSE!

TRUTH:
There are NO dietary restrictions after kidney donation. A kidney donor can eat anything, but like everyone, should follow a healthy and well balanced diet.
Did you know?

30 MILLION OR 1 IN 7

AMERICAN ADULTS HAVE

CHRONIC KIDNEY DISEASE
Renal replacement therapy

- People with end stage renal disease require renal replacement therapy in order to survive.
- This can be achieved through dialysis – hemodialysis, peritoneal dialysis, or through kidney transplantation.
- The mortality (death rate) and morbidity (disease rate) associated with dialysis is 4-5 times higher.
Transplantation
Procedure - transplant recipient
Around 100,000 patients with end stage renal disease (ESRD) or kidney failure are on the waitlist for kidney transplantation.

Only around 17,000 kidney transplants are done every year.

Great demand for organs with limited supply.
Types of kidney transplantation

- Living donor kidney transplantation
- Deceased donor kidney transplantation
The donor operation
A living kidney donor will have some pain after surgery from the surgical incisions, and from gas and bloating. This pain will decrease in a few days after surgery and can be controlled with pain medications if needed.
TRUE OR FALSE?

A living kidney donor must be about the same age as the recipient. **FALSE!**

**TRUTH:** Transplants can work very well even when there is an age difference between the donor and recipient.
Survival rates in the 2 groups

• The 5 year and 10 year survival for deceased donor kidney graft is 86.1% and 46.7% respectively.

• The 5 year and 10 year survival for living donor kidney graft is 93% and 89.2% respectively.
TRUE OR FALSE?

A living kidney donor can’t be older than 60 years of age. **FALSE!**

**TRUTH:**
A living kidney donor can be older than 60 years of age, and have no problems from the surgery for the donation. They kidney from a donor older that 60 years can work very well.
The living donor surgery

- Donors are selected after careful consideration.
- Routine approach for the procedure.
- Small incisions (surgical cuts).
- 2-3 days in the hospital after surgery.
- Considerably less pain with the procedure.
- 4-6 weeks for donor to return to normal activities.
- Return to work within a few days if work isn’t physically demanding.
Risks of being a living donor

- Risks involving a surgery – pain, bleeding, infection.
- Post surgical complications – pneumonia, urinary tract infection, blood clots (DVT), wound infection, side effects of drugs.
- Longer recovery than normal for some patients.
- Minimal risk of developing high blood pressure long term.
- Extremely low risk of death – 0.03% (1 in 10,000).
What happens after surgery?

- Quality of life of a living donor is comparable to an average adult with 2 kidneys.
- Donor is in great condition health wise – extensive testing and complete physical work up done prior to donation.
TRUE OR FALSE?

A living kidney donor can no longer play sports or exercise.

FALSE!

TRUTH:
A kidney donor should be able to return to regular activities, including sports and exercise, in about 4 – 6 weeks after surgery.
TRUE OR FALSE?

A living kidney donor can no drink alcohol after surgery.

FALSE!

TRUTH:
A kidney donor CAN drink alcohol in moderation.
(That said, drinking too much alcohol is dangerous for anyone, and there is a greater risk of dehydration with 1 kidney.)
TRUE OR FALSE?

A kidney donor has to take medications for the rest of their life.

FALSE!

TRUTH:
A donor will need pain medication and stool softeners for a short time after surgery. After that time, a donor doesn’t have to take any medication.
Follow up care is provided for all kidney donors.

Recipient’s insurance pays for the living donor’s medical expenses related to the donation (not all issues and complications are covered by the recipient’s insurance).

- All the pre operative check up and testing of the living donors will be covered by the recipient’s insurance.
- Surgery and immediate post operative care is covered by the recipient's insurance.
- Limited coverage is provided after surgery.
What's NOT covered by recipient’s insurance?

- Travel expenses of the kidney donor
- Housing or hotel for donors from out of town
- Food while traveling
- Lost wages
- Costs of childcare
Pregnancy after donation

• Can you become pregnant after donating your kidney?

• What are the risks?
TRUE OR FALSE?

A kidney donor’s sex life is negatively affected by donation.

FALSE!

TRUTH:
A kidney donor can be sexually active when they feel well enough.
Sexual libido will not be affected by donation.
TRUE OR FALSE?

A female kidney donor cannot get pregnant after donation. FALSE!

TRUTH:
A female kidney donor CAN get pregnant after donation. Although the donor should wait 3 – 6 months after donation to become pregnant.

The body needs time to recover from the surgery, and to adjust to living with 1 kidney before pregnancy.

Ron and Joy Paul Kidney Center
The George Washington University
Novel strategies to increase transplantation rates

- Paired kidney exchanges.
- A2 to B blood group incompatible transplantation.
- ABO fully incompatible transplantation.
Paired kidney exchanges
Paired kidney exchange and altruistic kidney donation
TRUE OR FALSE?

A kidney donor and recipient must be related by blood.

FALSE!

TRUTH:
A donor and recipient don’t have to be related by blood. People can donate to family members, friends, or even strangers.
TRUE OR FALSE?

A living kidney donor has to be of the same blood type as the recipient. **FALSE!**

**TRUTH:**
A living kidney donor’s blood type need not have to be identical to the recipient. If they don’t match, they can enter into a paired kidney exchange OR receive an ABO blood group incompatible kidney transplant if they meet the criteria for it.
ABO Incompatible Deceased Donor Kidney Transplantation – Time To Remove The Barrier.

Joseph Keith Melancon MD, Mehdi Nayeypour, Karthika Mahendran MBBS, Holden Spivak, Elsie Lee MD, Muralidaran Jagadeesan MD, Naoru Koizumi PhD.

Division of Transplant Surgery, The George Washington University Hospital, Washington, DC.

INTRODUCTION

- We report the first reported case of a successful directed deceased donor ABO fully incompatible kidney transplantation.
- Our patient is a 62 year old gentleman who underwent a directed deceased donor kidney transplantation on 10/01/2015. He is currently over 2 years post transplantation, and is doing well. The graft shows no evidence of biopsy proven rejection, and the most recent serum creatinine level is 1.0.

OBJECTIVES

- To prove that the immediate and long term outcomes of ABO incompatible kidney transplantation is comparable with ABO compatible transplantation.
- To introduce more flexibility into the matching algorithm, thereby allowing us to achieve more local and regional matches for kidney transplantation.
- To have better HLA matched kidneys in highly sensitized patients (PRA >80%), thereby increasing the number of kidneys in the donor pool.

METHODS

- A simulation analysis was performed to examine the consequences of implementation of ABO incompatible transplants on the national registry of patients who are waitlisted for kidney transplant.
- Kidney Panorama: Simulated Allocation Model - a software developed by the US Scientific Registry of Transplant Recipients (SRTR) was used.
- ABO compatibility modified as shown in the table below.

<table>
<thead>
<tr>
<th>Type</th>
<th>Originalachine Compatibility</th>
<th>Modified ABO Compatibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>O</td>
<td>O</td>
<td>C</td>
</tr>
<tr>
<td>A</td>
<td>X</td>
<td>X</td>
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<tr>
<td>BX</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>AB</td>
<td>X</td>
<td>X</td>
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</table>

<table>
<thead>
<tr>
<th>Compatibility</th>
<th>C</th>
<th>X</th>
<th>I</th>
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<tbody>
<tr>
<td>C-compatible</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X-incompatible</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-identical</td>
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RESULTS

<table>
<thead>
<tr>
<th></th>
<th>Existing System</th>
<th>Proposed System</th>
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</thead>
<tbody>
<tr>
<td>% of Transplants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EOLA, % (n)</td>
<td>13,686 (214)</td>
<td>13,686 (214)</td>
</tr>
<tr>
<td>White</td>
<td>5,322 (40.6)</td>
<td>5,322 (40.6)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1,085 (8.0)</td>
<td>1,085 (8.0)</td>
</tr>
<tr>
<td>Other</td>
<td>718 (5.3)</td>
<td>718 (5.3)</td>
</tr>
<tr>
<td>Match type, n (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>8,093 (62.6)</td>
<td>8,093 (62.6)</td>
</tr>
<tr>
<td>Regional</td>
<td>802 (6.3)</td>
<td>802 (6.3)</td>
</tr>
<tr>
<td>National</td>
<td>2,010 (15.1)</td>
<td>2,010 (15.1)</td>
</tr>
<tr>
<td>HLA mismatches n</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N/0</td>
<td>3,570 (27.7)</td>
<td>3,570 (27.7)</td>
</tr>
<tr>
<td>Number of PRA-in-patients n (%)</td>
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<td></td>
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<tr>
<td>Mixed type, n (%)</td>
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</tr>
<tr>
<td>A</td>
<td>2,010 (16.1)</td>
<td>2,010 (16.1)</td>
</tr>
<tr>
<td>B</td>
<td>1,705 (13.5)</td>
<td>1,705 (13.5)</td>
</tr>
<tr>
<td>AB</td>
<td>1,095 (8.8)</td>
<td>1,095 (8.8)</td>
</tr>
<tr>
<td>0</td>
<td>5,036 (40.7)</td>
<td>5,036 (40.7)</td>
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<tr>
<td>Age (mean)</td>
<td>49.9</td>
<td>49.0</td>
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<tr>
<td>Probability of acceptance among recipients (mean)</td>
<td></td>
<td></td>
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<tr>
<td>Wait time in days (median)</td>
<td>175</td>
<td>222</td>
</tr>
<tr>
<td>% of discarded kidneys</td>
<td>2.670</td>
<td>2.640</td>
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CONCLUSIONS

- This case reveals the possibility of a successful ABO fully incompatible deceased donor kidney transplantation.
- The simulation analysis proved that if this modification was incorporated into the national kidney allocation system, it would translate into maximizing the availability of kidneys in populations that are harder to transplant.
- The proposed system would be introducing much more flexibility into the matching algorithm - allowing us to achieve better HLA matched kidneys for our highly sensitized patients, increase availability of local organs, thereby reducing cold ischemia time for these organs, ultimately increasing the utilization of these valuable organs which would otherwise be discarded.
What are some of the ways we have adopted to increase the awareness and access to health care in terms of kidney disease?

- Outreach
- Education
- Kidney screening programs
- Dialysis outreach
- Health fairs
- Social media outreach
Date: February 10, 2019
Time: 7 am
Topic: Chronic kidney disease and free kidney screenings

Celebrating 1000 free kidney screenings!!!
Shout out to all the selfless living donors out there who donated an organ! You are true heroes and have given someone a second chance at life.

We want to express our gratitude to the deceased donors' family members who made the decision to save lives at the most difficult time. Please take a moment to appreciate all the lives that these remarkable people have saved.

Sign up to be an organ donor. Lives could be saved some day because of the decision you make now! Help those in need by making your donation.

"You make a living by what you get; you make a life by what you give."
~Winston Churchill
Talk to your doctor about kidney screening

- Protein in the urine! – earliest predictor of kidney disease
- Blood pressure check
- At our center we have screened over 1200 people for kidney disease
  - ¼ of these people were found to have abnormal results
  - 90% of the people with abnormal results have been referred to a doctor for further care.
Sign up to be a donor today!
QUESTIONS???
Join us for our next webinar!

Topic: Gout in Kidney Disease
Speaker: TBD
Date & Time: TBD

Go to www.KidneyFund.org/webinars to learn more and register!