



**ASTS 7<sup>th</sup> Annual Fellows Symposium  
Kidney Case Studies  
Saturday, October 5, 2013**

**Case #1**

**ECD kidney offer**

Donor: 62 y/o female 5'3", 110 lb with CVA and brain death. Has a h/o hypertension x 15 years and type II DM, diet-controlled. Hemodynamically stable with low dose vasopressin. Creatinine: Initial 0.8 → peak 1.6 → current 1.4. Urine output 50-100 hour. KDPI 100%.

Organ Data: Size: L 14 cm x 8 cm; R 15 cm x 9 cm;

Biopsy: L 17% glomerulosclerosis, mild to moderate arteriosclerosis

R 25% glomerulosclerosis, mild to moderate arteriosclerosis.

Machine perfusion: Parameters - Resistance 0.1, flow 130(units ML/min)

- A. Would you accept these kidneys for somebody on your waiting list?
- B. If yes, which kidney would you take? L? R? both (i.e. 2 for 1)?
- C. If yes, which of these flow negative patients would you offer this kidney to?
  - 1) 26 y/o male 6'3", 250 lbs, HD x 2 years, PRA 80%
  - 2) 38 y/o female 5'3", 120 lbs, HD x 5 years, PRA 85%
  - 3) 65 y/o female 5'6", 140 lbs, PD x 4 years, PRA 20%
- D. What would you say to the recipient when obtaining consent?

**Case #2**

**SCD kidney offer**

Donor: 21 y/o male, 6'2", 220lbs with no significant medical history of concern, but was positive for ETOH, MVA and brain death. Transfused 20 U PRBCs. Underwent ex lap, splenectomy, large pancreatico-duodenal hematoma, ongoing bleeding from packed grade 3 liver lacerations. Creatinine 1.0 □ 1.9 □ 2.8. Urine output 20-40 hour. Significant hypotension prior to OR. Now "more stable" on vasopressin and levophed. No interest in extra renal organs. KDPI 10%.

- A. Do you have any suggestions/requests of the donor management team?
- B. Would you accept these kidneys for somebody on your list?
- C. If yes, which of your flow negative recipients would you offer this kidney to?
  - 1) 38 y/o white female 5'8" 150 lbs, HD x 5 years, PRA 0%
  - 2) 60 y/o AA male 6'5" 250 lbs, on HD x 4 years, PRA 20%
  - 3) 25 y/o Hispanic female 5'4" 170 lbs, on PD x 2 years, PRA 15%
- D. What would you say to the recipient when obtaining consent?

**Case #3**

**Donor with Increased Risk of Infection**

Donor: 35 y.o Hispanic male 5'8", 170 lbs; brain death following drug overdose, 30 minutes downtime, CPR. Recently in jail for selling narcotics. Hemodynamically stable on low dose vasopressin. Creatinine 3.0 □ 1.5 □ 0.9. Urine output 100-150 hour. Serologies and NAT negative. KDPI 22%.

- A. Do you have any suggestions/requests of the donor management team?
- B. Would you accept these kidneys for somebody on your list?

C. If yes, which of these flow negative recipients would you offer this kidney to?

- 1) 50 y/o white male 5'11", 190 lbs, HD x 6 years, PRA 80%
- 2) 60 y/o AA female 5'6", 260 lbs, HD x 5 years, PRA 80%
- 3) 45 y/o Hispanic female 5'3" 160 lbs, HD x 3 years, PRA 20%

D. What would you say to the recipient when obtaining consent?

E. How would you follow this patient post-transplant?

#### **Case #4**

##### **Living Donor Selection**

A 60 y/o woman has CKD stage V due to polycystic kidney disease. She has been found to be a suitable candidate for renal transplantation. She is blood type O with a PRA of 15% with antibodies to A2, B7, DR6. The following candidates have presented for living donor evaluation.

- 1) 24 y/o son, blood type O, BMI 24, no unacceptable antigens
- 2) 62 y/o husband, blood type AB, BMI 28, no unacceptable antigens
- 3) 62 y/o sister, blood type O, BMI 35, no unacceptable antigens
- 4) 48 y/o nephew, blood type O, BMI 28, HLA with DR6
- 5) 64 y/o brother, blood type O, BMI 28, no unacceptable antigens, hypertension on 50mg of metoprolol BID

A. Which of these potential living donors would you consider for her?

B. What further evaluation would you perform of the recipient or potential donors?

C. The most suitable donor has a CT scan that demonstrates 3 renal arteries on the left and 1 on the right with single renal veins. Would you use either of these kidneys?

#### **Case #5**

##### **Evaluation of Post-Transplant Renal Dysfunction**

Recipient is a 49 y/o white male, 6'2" 225 lbs. with ESRD due to DM, HTN. PRA 20% with a historic DSA, negative CDC & flow crossmatches. Transplanted 3 weeks ago with a kidney from the following donor: 55 y/o Asian male 5'7", 150 lbs with a h/o hypertension, brain death from CVA. Terminal creatinine: 1.0. Recovery biopsy: 4% glomerulosclerosis, minimal arteriosclerosis. Anatomy: 2 renal arteries, 2 ureters.

Presents to clinic with creatinine of 2.8 (nadir 1.3). Minimal UOP. Immunosuppression consists of tacrolimus, mycophenolate and prednisone following anti-thymocyte globulin (ATG) induction.

A. What additional questions do you have for the patient?

B. How would you evaluate this patient?

C. Discuss biopsy finding that would prompt treatment.

D. DSA testing is performed. How is the diagnosis of antibody-mediated rejection made? How would you treat AMR?