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Gene variants in organ donors linked to shorter survival of transplanted kidneys

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Transplanted kidneys may not function long-term if they come from donors with variants in a particular gene, according to a study that will be presented at ASN Kidney Week 2014 November 11-16 at the Pennsylvania Convention Center in Philadelphia, PA.

Previous research from a single center in North Carolina found that risk variants in the apolipoprotein L1 gene (APOL1) in African American deceased kidney donors were linked with shorter survival of transplanted kidneys. The APOL1 gene creates a protein that is a component of HDL, or good cholesterol. Variation in the APOL1 gene is associated with up to 40% of all kidney disease in African Americans who undergo dialysis or kidney transplantation, and APOL1 kidney risk variants are present only on the chromosomes of individuals who possess recent African ancestry.

Researchers led by Barry Freedman (Wake Forest School of Medicine) looked for the potential link between APOL1 risk variants and shorter survival of transplanted kidneys in a larger group of patients. The new multi-center study included 675 deceased donor kidney transplants from African American donors.

Results from the study confirmed that 2 APOL1 gene variants in donor kidneys were associated with more than a 2-fold increased risk of organ failure after transplantation.

"These results warrant consideration of rapidly genotyping deceased

African American kidney donors for APOL1 risk variants at the time of organ recovery," said Dr. Freedman. "APOL1 genotype data should be incorporated in the organ allocation and informed-consent processes."

More information: Study: "Apolipoprotein L1 Gene Variants in Deceased Organ Donors Are Associated with Renal Allograft Failure" (Abstract TH-OR165)

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