

EMBARGOED FOR RELEASE until December 15, 2016 – 5:00 PM (ET)

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DEMENTIA AND ALZHEIMER'S DISEASE ARE SERIOUS HEALTH CONCERNS FOR OLDER KIDNEY TRANSPLANT RECIPIENTS

Rates are higher in transplant recipients and may increase their risks of organ loss and early death

Highlights

- Risks of dementia and Alzheimer's disease are higher in older kidney transplant recipients than in older adults in the general population.
- Among kidney transplant recipients, those who developed dementia or Alzheimer's disease had higher rates of organ loss and patient death than those who did not develop these conditions.

There has been a 5-fold rise in the number of older deceased donor kidney transplant recipients since 1990.

Washington, DC (December 15, 2016) — Dementia and Alzheimer's disease develop at elevated rates in older kidney transplant recipients and may threaten the health of their transplanted organ as well as their own survival. The findings come from a study appearing in an upcoming issue of the *Journal of the American Society of Nephrology* (JASN).

Older patients with kidney failure who receive a kidney transplant may develop dementia and Alzheimer's disease (a subtype of dementia) related to their long-standing kidney disease and/or their need for neurotoxic immunosuppressant drugs to prevent rejection of their transplanted organ.

To investigate patients' risks, Mara McAdams-DeMarco, PhD (Johns Hopkins Bloomberg School of Public Health) and her colleagues studied 40,918 kidney transplant recipients aged ≥55 years and linked their information to Medicare claims data through the US Renal Data System.

Kidney transplant recipients had a 10-year dementia risk ranging from 5.1% for recipients aged 55 to 60 years to 17.0% for recipients aged ≥75 years; 10-year Alzheimer's disease risk ranged from 1.0% to 6.7%, respectively. (For comparison with the general population, other research has reported a 1% to 1.5% incidence of dementia in adults aged 65 years

and a 7.4% to 7.6% incidence in adults aged 75 years. For Alzheimer's disease, a 0.6% to 0.9% incidence had been reported in adults aged 65 years and a 4.4% to 5.4% incidence in adults aged 75 years.) The strongest predictors for dementia and Alzheimer's disease were older age and pre-transplant diabetes.

Recipients who developed dementia had a 43.1% chance of losing function of their transplanted kidney within 10 years, compared with a 28.8% chance in recipients who did not develop dementia. After adjustments, this corresponded to a 1.5-times increased risk for those with dementia. Similarly, recipients who developed dementia had an 89.9% chance of dying within 10 years, compared with a 55.7% chance in those without dementia, a 2.4-times increased risk after adjustments. Similar results concerning organ and patient survival were seen related to Alzheimer's disease.

"There is the need for greater awareness of the risk for dementia and Alzheimer's disease in older patients undergoing kidney transplantation. The risk of dementia and Alzheimer's disease should be weighed against the burden of dialysis and not adversely impact the decision to transplant otherwise acceptable older transplant candidates," said Dr. McAdams-DeMarco.

Study co-authors include Sunjae Bae, KMD, MPH, Nadia Chu, MPH, Alden Gross, PhD, Charles Brown IV, MD, MHS, Esther Oh, MD, PhD, Paul Rosenberg, MD, Karin Neufeld, MD, MPH, Ravi Varadhan, PhD, Marilyn Albert, PhD, Jeremy Walston, MD, and Dorry Segev, MD, PhD.

Disclosures: This work was supported by the National Institutes of Health, and no authors reported a financial disclosures related to the research.

The article, entitled "Dementia and Alzheimer's Disease among Older Kidney Transplant Recipients," will appear online at <http://jasn.asnjournals.org/> on December 15, 2016, doi: 10.1681/ASN.2016080816.

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