

Research provides insights on the link between kidney damage and cognitive impairment

November 17 2016

People with kidney disease are at high risk of cognitive impairment, but the nature of this relationship remains uncertain. A new analysis that investigates this link will be presented at ASN Kidney Week 2016 November 15–20 at McCormick Place in Chicago, IL.

For the analysis, Daniel Weiner, MD, FASN (Tufts Medical Center) and his colleagues gathered information from the Systolic Blood Pressure INTervention (SPRINT) cognition substudy, SPRINT-MIND. Among 9361 SPRINT-MIND participants, 2800 were administered an expanded cognitive battery at the start of the study and 2707 had complete data; 637 also had brain imaging.

After adjusting for various demographic and clinical characteristics, higher albumin in the urine, which is indicative of poor kidney function, was linked with worse performance on tests of global cognitive function, executive function, memory, and attention. Each doubling of the amount of albumin in the urine was akin to the effect of 6 to 14 months of aging in these cognitive domains. Lower estimated [glomerular filtration rate](#), another indicator of poor kidney function, was linked with worse performance on tests of global cognitive function and memory. In the subset of participants with brain imaging, higher albumin in the urine was associated with abnormal white matter regions in the brain.

"The findings cement the association between kidney damage and

cognitive functioning, suggesting that albumin in the urine and changes in brain structure are likely both representations of the same vascular process, just in different organs," said Dr. Weiner. "This manifests with worse brain function, particularly in domains linked to cerebrovascular disease. The fact that this comes from baseline data in the SPRINT trial suggests that these findings are likely relevant to tens of millions of US adults."

More information: Study: "Cognitive Function and Kidney Disease: Baseline Data from the SPRINT Trial" (Abstract 744)

Provided by American Society of Nephrology

Citation: Research provides insights on the link between kidney damage and cognitive impairment (2016, November 17) retrieved 14 January 2023 from <https://medicalxpress.com/news/2016-11-insights-link-kidney-cognitive-impairment.html>

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