Atrial fibrillation risk rises with decreasing kidney function

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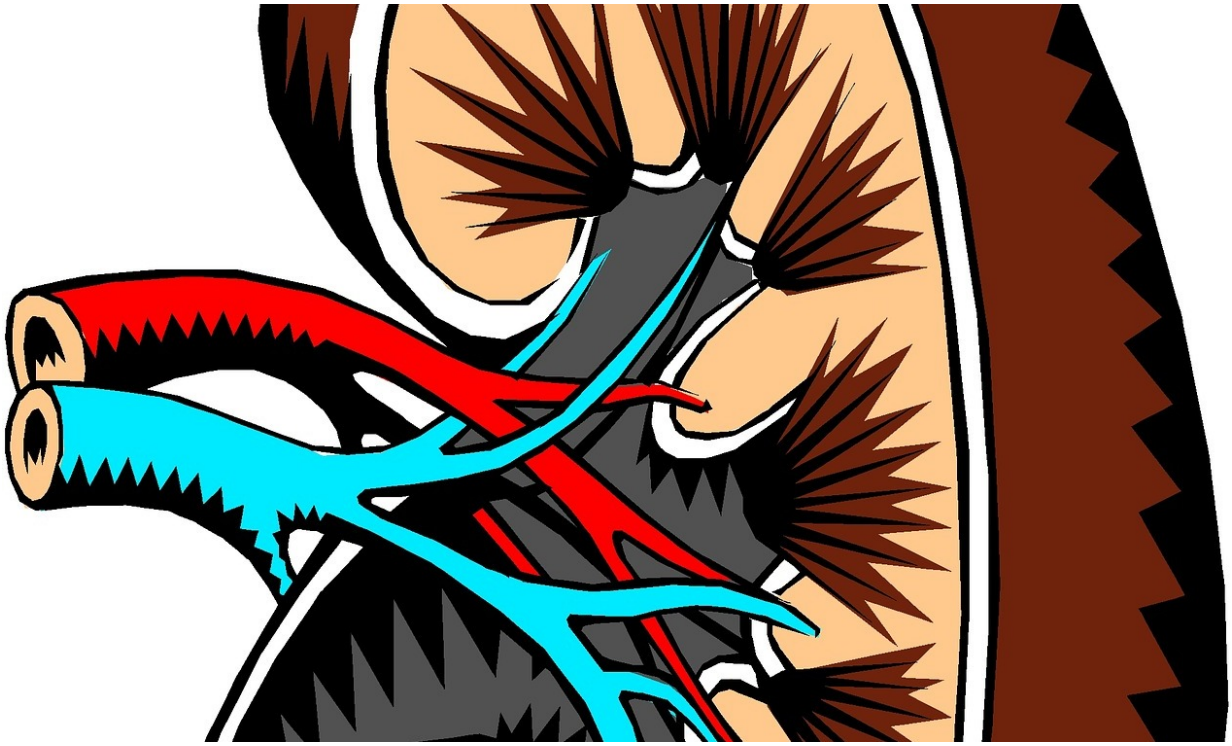

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A new study indicates that individuals with kidney disease have a higher risk of developing atrial fibrillation, or an irregular heartbeat. The findings, which appear in an upcoming issue of the *Clinical Journal of the American Society of Nephrology* (*CJASN*), suggest that individuals with poor kidney function may benefit from preventive interventions to

maintain a normal heart rhythm.

Atrial fibrillation is the most common sustained arrhythmia in the general population, and it is especially high in patients with kidney failure. Because there are limited data on the incidence of atrial fibrillation across a broad range of kidney function, Nisha Bansal, MD, MAS (University of Washington) and her colleagues analyzed the results of 3 prospective studies: the Jackson Heart Study, the Multi-Ethnic Study of Atherosclerosis, and the Cardiovascular Health Study.

In the analysis of 16,769 community-dwelling individuals without atrial fibrillation, there was a step-wise increase in the risk of incident atrial fibrillation with decreasing kidney function. In patients with the lowest kidney function or the greatest amount of proteinuria, the risk for developing atrial fibrillation was approximately two-fold higher compared with those without kidney disease. This link held even after accounting for a wide range of possible contributors, including measures of cardiovascular health, and it was consistent across subgroups of participants categorized by age, sex, race, and comorbidity.

"This study found that even modest abnormalities in kidney function were linked with a higher risk of developing atrial fibrillation later in life," said Dr. Bansal. "Atrial fibrillation may affect the selection of cardiovascular therapies and is associated with poor clinical outcomes. Thus, an understanding of the risk of atrial fibrillation across a broad range of kidney function is important."

Dr. Bansal noted that additional studies are needed to determine the mechanistic link between kidney disease and atrial fibrillation.

More information: "Estimated glomerular filtration rate and albuminuria in relation to risk of incident atrial fibrillation: a meta-analysis of the Jackson Heart Study, the Multi-Ethnic Study of

Atherosclerosis and the Cardiovascular Health Study," *Clinical Journal of the American Society of Nephrology* (2017). DOI: 10.2215/CJN.01860217