

Declining Kidney Function Linked to Higher AF Risk

In combination with albuminuria, chronic kidney disease predicted atrial fibrillation.

Chronic kidney disease (CKD) predisposes patients to coronary heart disease, but its association with atrial fibrillation (AF) is unclear. To explore this relation, researchers used data from a large cohort study with 10,328 participants who were AF-free at baseline.

During median follow-up of about 10 years, 788 cases of incident AF were identified; declining kidney function as measured by cystatin C and albuminuria were both associated with elevated risk for incident AF. Compared with people who had estimated glomerular filtration rates (eGFRs) of ≥ 90 mL/minute/1.73 m², the hazard ratios for AF were 1.3, 1.6, and 3.2 for those with eGFRs of 60–89, 30–59, and 15–29 mL/minute/1.73 m², respectively. Macroalbuminuria and even microalbuminuria also were associated with elevated risk for AF (HRs, 3.2 and 2.0, respectively). In people with both low eGFRs and albuminuria, the HR for AF was 13.1.

Comment: In this population-based study, risk for incident AF was associated with both declining estimated GFR and albuminuria, even after adjustment for other risk factors. Previous studies of this issue have been mixed, and an association does not necessarily mean causality. However, the authors present several plausible mechanisms by which CKD might beget AF, such as worsened hypertension and fluid status and activation of the renin–angiotensin system.

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