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Marijuana Users Aren't at Increased Kidney Disease Risk

Current or past use of marijuana does not appear to affect the risk of developing kidney disease or decreased renal function, reports a study in *The American Journal of Medicine*.

The cross-sectional study included data from 13,995 respondents, aged 15 to 59, to the National Health and Nutrition Examination Survey from 2007 to 2014. Self-reported marijuana use, recent or past, was analyzed for association with renal outcomes: serum creatinine concentration, estimated glomerular filtration rate, and chronic kidney disease (stage 2 or higher).

In the nationally representative survey, 46.3% of respondents said they had never used marijuana, 39.3% were past users, and 14.4% were current users. Current marijuana users were more likely to be male, younger, and current alcohol and tobacco users. Unadjusted data suggested higher mean serum creatinine and lower mean eGFR in past and current marijuana users.

However, on adjusted analysis, none of the three renal outcomes was associated with marijuana use. Serum creatinine and eGFR showed an increasing trend in past and current marijuana users versus never-users, but these were not statistically significant. Sensitivity analysis limited to respondents free of cardiovascular disease also found no significant associations.

As more states legalize medical and recreational marijuana, use of this drug in the population is likely to increase. As for other acute and chronic health effects, little is known about how marijuana affects renal function.

This study—the largest of its kind—finds no clinically significant effect of past or current marijuana use on serum creatinine, eGFR, microalbuminuria, or stage 2 or higher CKD. While characterizing the results as "somewhat reassuring," the authors note that their study provides no information on the renal safety of marijuana in heavy users, older adults, or patients with pre-existing CKD [Lu C, et al. Marijuana use and renal function among US adults. *Am J Med* 2018; 131:408–414] .

Biologic Therapies for RA Reduce Kidney Risks

In patients with rheumatoid arthritis, treatment with biologic agents is associated with a lower risk of declining renal function and chronic kidney disease (CKD), reports a study in *Kidney International*.

Using a Department of Veterans Affairs database, the researchers identified 20,757 veterans diagnosed with RA between 2004 and 2006, with follow-up to 2013. All included patients had initially normal kidney function: estimated glomerular filtration rate (eGFR) 60 mL/min/1.73 m^2 or higher. Treatment with biologic agents was examined for association with incident CKD, defined as eGFR less than 60 mL/min/1.73 m^2, with at least a 25% decrease; and change in renal function, classified as <–3, –3, <0 (reference), and ≥0 mL/min/1.73 m^2. Treatment and control groups were propensity-matched, based on their likelihood of initiating biologic treatment.

Overall, 22% of patients received biologic agents: most commonly etanercept, followed by adalimumab and infliximab. Patients receiving biologic therapy were younger and less likely to be male and African American. They also had higher eGFR, higher income, and less comorbidity.

Biologic therapy was associated with a lower incidence of CKD: hazard ratio 0.95 for a cutoff of under 60 mL/min/1.73 m^2 and 0.71 for under 45 mL/min/1.73 m^2. Patients receiving biologics were also less likely to have progressive eGFR decline: multinomial odds ratio 0.67 for an eGFR slope <–3 mL/min/1.73 m^2 and 0.76 for ≥0 mL/min/1.73 m^2 (relative to –3 to <0). The yearly rate of eGFR decline slowed from –1.0 mL/min/1.73 m^2 before to –0.4 mL/min/1.73 m^2 after biologics were started.

Patients with RA are at elevated risk of kidney disease, likely via chronic inflammation and/or exposure to nephrotoxic drugs. Newer biologic agents used to reduce systemic inflammation in RA have been shown to have beneficial effects in lowering cardiovascular risk.

This study suggests that biologic therapy reduces the risk of CKD and progressive decline in renal function in a nationwide cohort of veterans with RA. The associations are independent of known risk factors for CKD. [Sumida K, et al. Treatment of rheumatoid arthritis with biologic agents lowers the risk of incident chronic kidney disease. *Kidney Int* 2018. DOI: 10.1016/j.kint.2017.11.025].