Hyperuricemia Boosts Risk of Hypertension in Young Adults

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Body

Young adults with hyperuricemia faced a significantly increased risk for later developing hypertension, based on follow-up of more than 4,900 Americans.

This link between hyperuricemia and the later appearance of hypertension did not involve a confounding role by metabolic syndrome.

And although the analysis could not establish a causal link between hyperuricemia and hypertension, the results indicated that an elevated serum level of uric acid marks people with an increased risk for later having hypertension, according to Dr. Eswar Krishnan.

Dr. Krishnan and his associates conducted a multivariate analysis that adjusted for baseline differences in subject age, gender, race, serum creatinine clearance, and waist circumferences.

The investigators found that people in the highest quartile of serum uric acid level at baseline had a significant, 76% increased risk for later developing hypertension, compared with the quartile of people with the lowest baseline serum uric acid level, reported Dr. Krishnan, a rheumatologist at Stanford (Calif.) University.

The study used data from the 5,115 people enrolled in the ***Coronary Artery Risk Development in Young Adults*** (CARDIA), which entered people between the ages of 18-33 years at four U.S. sites in 1986.

The investigators followed them for up to 20 years.

Excluding people who at baseline had hypertension or any other component of metabolic syndrome (abdominal obesity, elevated triglycerides, depressed high-density lipoprotein cholesterol, elevated fasting glucose) left 4,918 people for the analysis.

The researchers used serum uric acid levels as the basis for dividing the study group into quartile.

They found that in men serum uric acid levels ranged from 0.4-5.3 mg/dL uric acid in the lowest quartile to 6.8 mg/dL or greater in the highest quartile, and in women ranged from 0.6-3.7 mg/dL in the lowest quartile to 5.0 mg/dL or greater in the highest quartile.

During the 20 years of follow-up, 7% of the men in the lowest quartile for serum uric acid developed incident hypertension. In contrast, 16% of the men in the highest uric acid quartile developed new-onset hypertension. The difference was statistically significant, Dr. Krishnan and his associates reported at the annual European Congress of Rheumatology in London.

When the researchers subdivided the CARDIA subjects by race and sex, elevated serum uric acid levels linked with a significantly increased risk of later developing hypertension among black men and women and among white men.

The link did not reach statistical significance among white women because of the small number of incident cases of hypertension during follow-up.

The analysis was sponsored by Takeda, which markets febuxostat (Uloric), a drug approved to lower serum uric acid levels in patients with gout.

Dr. Krishnan said that he has been a consultant to Takeda, Savient, and Ardea. Three coauthors on the study are Takeda employees.

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