Hyperuricemia Tied to Diabetes in Young Adults

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Body

PHILADELPHIA - Hyperuricemia in young adults was linked to a significant, roughly twofold increased risk for developing type 2 diabetes during the subsequent 13 years in an observational study with nearly 5,000 participants.

"Hyperuricemia may be a useful marker for predicting type 2 diabetes among young adults," Dr. Eswar Krishnan said at the annual meeting of the American College of Rheumatology.

But Dr. Krishnan also cautioned that it is not known whether high serum levels of uric acid play a causal role for developing type 2 diabetes, nor is it known if an intervention can prevent diabetes from developing.

This finding follows a meeting report from Dr. Krishnan earlier this year that hyperuricemia in young adults also was associated with a significantly increased risk for the development of coronary atherosclerosis, a finding made using the same database.

Both analyses used data collected from 5,115 asymptomatic men and women, aged 18-30, in the ***Coronary Artery Risk Development in Young Adults*** (***CARDIA) study***. Participants enrolled in four U.S. cities: Birmingham, Ala.; Chicago; Minneapolis; and Oakland, Calif. Half were African American, half were white, their mean age was 25, and none had long-standing risk factors for coronary disease. At baseline their average body mass index was 22 kg/m^2, and they reported on average a moderate amount of regular physical activity. The new diabetes analysis used data collected during 13 years of follow-up from 4,762 of the subjects.

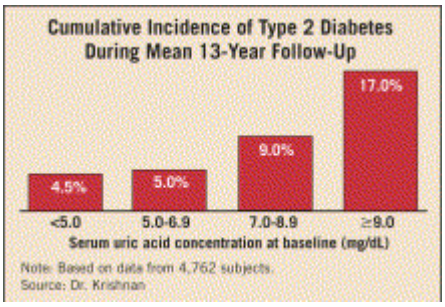
The cumulative incidence of newly diagnosed type 2 diabetes during follow-up ranged from 5% among people with baseline uric acid levels of less than 7.0 mg/dL to 17% among those with a baseline level of 9.0 mg/dL or higher. (See chart.) Type 2 diabetes was diagnosed in participants who had a fasting plasma glucose level of at least 126 mg/dL.

In a multivariate analysis that controlled for several baseline variables, people with a baseline serum uric acid level of 7.0 mg/dL or greater had a statistically significant, 94% higher risk for developing type 2 diabetes during follow-up, compared with people with a baseline level of less than 5.0 mg/dL, said Dr. Krishnan, a rheumatologist at Stanford (Calif.) University.

Only ten of the more than 4,000 people in the analysis had clinical features at baseline that met the diagnostic criteria for metabolic syndrome. When these 10 were excluded, the relationship between hyperuricemia and development of diabetes remained about the same, with a 99% increased risk for incident diabetes in those with a baseline serum uric acid of 7.0 mg/dL or higher compared with those with a level of less than 5.0 mg/dL.

Dr. Krishnan disclosed receiving research support and serving as a consultant to Takeda, a company that markets febuxostat (Uloric), a drug that lowers uric acid levels. Some of his associates on this study are employees of

Takeda. Dr. Krishnan also formerly held stock in Savient, a company that is developing another uric acid–lowering drug.



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