Author's Reply

Risk Factors for Subclinical Atherosclerosis and Uric Acid – Reply –

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Thanks for the attentive comments¹⁾ regarding our study on the association between serum uric acid and carotid intima-media thickness in the middle-aged and elderly Chinese population²⁾.

Reduced uric acid excretion and increased risk of hyperuricemia were documented in the aspirin usage patients³⁾. In our study, a total of 128 participants reported aspirin intake, accounting for 1.2% of the study population. The mean value (standard deviation, SD) of the serum uric acid level in participants taking aspirin was 329 ± 97 $\mu\text{mol/L}$, which is higher than that in participants without aspirin usage (299 ± 92 $\mu\text{mol/L}$, $P=0.0003$). Additional adjustment for aspirin usage did not change the results or conclusion (Odds ratio [OR]=1.11; 95% confidence interval [CI]=1.07–1.31). Neither did exclusion of participants taking aspirin from the study (OR=1.16; 95% CI=1.08–1.25).

Modest increased risks of coronary heart disease events and cardiovascular mortality associated with subclinical hypothyroidism were investigated in previous study⁴⁾. Subclinical hypothyroidism conferred an increased risk of coronary heart disease, with a hazard ratio (HR) of 1.89 (95% CI, 1.28–2.80) for a thyroid-stimulating hormone (TSH) level of 10 to 19.9 mIU/L compared to euthyroidism. Subclinical hypothyroidism was also closely related to an increased carotid intima-media thickness⁵⁾. The pooled meta-analysis of seven observational studies demonstrated higher carotid intima-media thickness in patients with subclinical hypothyroidism than those with euthyroidism [weighted mean difference (WMD)=0.064 mm, 95% CI=0.024–0.105; $P=0.002$]. However, the interaction of subclinical hypothyroidism on the association between uric acid and subclinical atherosclerosis has not been well explored. It would be interesting. Future large sample size and prospectively designed studies aiming to elucidate those associations are warranted.

Conflicts of Interest

The authors declare that they have no competing interests.

References

- 1) Altun B, Cintosun U, Ozturk K: Risk Factors for Subclinical Atherosclerosis and Uric Acid. *J Atheroscler Thromb*, 2015; 22: 999
- 2) Chen Y, Xu B, Sun W, Sun J, Wang T, Xu Y, Xu M, Lu J, Li X, Bi Y, Wang W, Ning G: Impact of the Serum Uric Acid Level on Subclinical Atherosclerosis in Middle-aged and Elderly Chinese. *J Atheroscler Thromb*, 2015; 22: 823-832
- 3) Caspi D, Lubart E, Graff E, Habot B, Yaron M, Segal R: The effect of mini-dose aspirin on renal function and uric acid handling in elderly patients. *Arthritis and rheumatism*, 2000; 43: 103-108
- 4) Takamura N, Hayashida N, Maeda T: Risk of coronary heart disease and mortality for adults with subclinical hypothyroidism. *JAMA*, 2010; 304: 2481-2482
- 5) Gao N, Zhang W, Zhang YZ, Yang Q, Chen SH: Carotid intima-media thickness in patients with subclinical hypothyroidism: a meta-analysis. *Atherosclerosis*, 2013; 227: 18-25

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