People with higher thyroid hormone levels may be at greater risk for atherosclerosis

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Middle-aged and elderly people with higher free thyroxine levels may be more likely to develop atherosclerotic diseases, new research from the Netherlands reports. The results of the study will be presented Sunday, April 2, at ENDO 2017, the annual meeting of the Endocrine Society, in Orlando, Fla.

"Coronary heart disease and stroke remain a leading cause of mortality worldwide, despite advances in prevention and treatment. Therefore, identifying additional modifiable risk factors for atherosclerosis is of major importance," said lead study author Arjola Bano, M.D., M.Sc., D.Sc., who is a Ph.D. candidate at Erasmus Medical Center in Rotterdam, the Netherlands.

"Our large population-based cohort study is the first to investigate the relationship between thyroid function and subclinical and clinical manifestations of atherosclerosis. These findings suggest that thyroid hormone measurement can help identify individuals at risk for atherosclerosis and may have future implications for the prevention of atherosclerotic morbidity and mortality," Bano added.

In their prospective study of 9,231 people 64.7 years of age on average who were part of the Rotterdam Study, Bano and colleagues explored the association between thyroid function and subclinical atherosclerosis, atherosclerotic events (fatal and nonfatal coronary heart disease or stroke) and atherosclerotic mortality (death from coronary heart disease, cerebrovascular or other atherosclerotic disease).

The researchers accounted for the possible influence of age, gender, body mass index, total cholesterol, triglycerides, systolic blood pressure, diabetes, alcohol and tobacco intake, and the use of antihypertensive and lipid-lowering drugs in their statistical analyses.

Over a median followup of 8.8 years, 1,130 atherosclerotic events and 580 atherosclerotic deaths occurred in the population. Higher free thyroxine (FT4) levels in these patients were associated with elevated risk of atherosclerotic morbidity and mortality independent of cardiovascular risk factors.

The authors also found that higher FT4 levels were associated with greater risk of subclinical atherosclerosis.

These results suggest that the link between thyroid function and atherosclerosis is mediated through yet unexplored cardiovascular risk factors or alternative pathways, the authors wrote in their abstract.

Bano added, "Further research is needed to replicate our findings and investigate potential implications."

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