

Smoking Cessation Ups Hypothyroidism Risk

VITALS

Major Finding: Smokers may face an elevated risk of hypothyroidism in the first 2 years after they quit using tobacco.

Data Source: In a case-control study of 140 patients with new-onset autoimmune hypothyroidism and 560 controls, patients who had recently stopped smoking were more than 5 times as likely to have the disorder as never-smokers, or those who had stopped smoking more than 2 years before.

Disclosures: Dr. Carle said he had no potential financial conflicts.

BY MICHELE G. SULLIVAN

FROM THE INTERNATIONAL THYROID MEETING

PARIS – Smokers who have recently kicked the habit could face a significant increase in the risk of developing new-onset hypothyroidism.

The risk is greatest within the first 2 years of quitting, when it can run as high as 5 times the risk of someone who has never smoked, or who has been tobacco-free for more than 2 years.

There's no obvious explanation for the phenomenon,

Dr. Allan Carle said. However, he noted, a 2007 study suggests that current smokers actually have a significantly lower risk of developing hypothyroidism but an increased risk of hyperthyroidism (*Arch. Intern. Med.* 2007;167:1428-32).

"Perhaps quitting causes some kind of rebound effect, with changes in antithyroid antibodies," said Dr. Carle of the Aalborg Hospital, Denmark.

But in his case-control study, he and his associates could only observe the phenomenon – not uncover its possible cause.

Dr. Carle and his colleagues compared 140 patients with incident autoimmune overt hypothyroidism, extracted from a population-based study, to 560 age- and sex-matched controls from the same population.

All the subjects provided information on their smoking status, including daily and overall tobacco intake, years of smoking, pack/years of smoking, and – if they were past smokers – the time since quitting.

Clinical measurements included autoantibodies to thyroid peroxidase (TPOAb) and thyroglobulin (TgAb); thyroid function; and a thyroid ultrasound exam. Possible relationships were examined in both univariate and multivariate models that controlled for confounding.

The investigators used the group of never-smokers as the reference group.

The risk of hypothyroidism among current smokers and those who had quit more than 2 years before the study was not significantly different from the risk among never-smokers.

There were also no significant relationships between new hypothyroidism and the duration or magnitude of smoking.

However, among subjects who had quit within the past 2 years, the risk of new hypothyroidism was significantly increased. Those who had quit within the past 1 year were 5.6 times as likely as never-smokers to develop the disorder; those who had quit 1-2 years before were 5 times as likely to develop it.

The risk of new-onset hypothyroidism dropped back to the reference range for those who had quit smoking 3-10 years before the study (odds ratio 0.85).

"Recent quitters were also more hypothyroid than other study subjects who had hypothyroidism," Dr. Carle said. Those who had quit within the past 2 years had a median total T4 level of 20 nmol/L, compared with 40 nmol/L in never-smokers with the disorder, and a median thyroid-stimulating hormone level of 82 mU/L compared with 49 mU/L.

"Looking at these data, we can say that in this series, 13% of new-onset hypothyroidism was associated with smoking withdrawal," Dr. Carle said. Because of this association, he recommended thyroid testing for all patients who report recent smoking cessation, "especially in those who have any complaints of symptoms." ■

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