

## **Tobacco Smoking May Increase Risk for Tuberculosis**

*Laurie Barclay, MD, Medscape Medical News*

September 1, 2009 — Tobacco smoking is associated with a 2-fold increased risk for active tuberculosis, according to the results of a prospective Taiwan cohort study reported in the September 1 issue of the *American Journal of Respiratory and Critical Care Medicine*.

“Previous case-control studies and a small number of cohort studies in high-risk populations have found an association between tobacco and active tuberculosis, but no cohort studies have been conducted in the general population on this association to date,” write Hsien-Ho Lin, MD, ScD, from Harvard School of Public Health in Boston, Massachusetts, and colleagues.

The goal of the study was to evaluate the association between tobacco smoking and active tuberculosis in a general population cohort of 17,699 participants older than 12 years enrolled in the Taiwan National Health Interview Survey. An in-person interview at baseline determined smoking status and other covariates. During follow-up from 2001 to 2004, incident cases of active tuberculosis were identified with use of the National Health Insurance database. After adjustment for age, sex, alcohol intake, socioeconomic status, and other covariates, the association between smoking status and active tuberculosis was estimated with multivariate logistic regression.

During the 3.3 years of follow-up, there were 57 new cases of active tuberculosis. Current smoking was linked to an increased risk for active tuberculosis (adjusted odds ratio [OR], 1.94; 95% confidence interval, 1.01 - 3.73). Compared with patients older than 65 years, those younger than 65 years showed a stronger association between current smoking and the risk for active tuberculosis (adjusted OR, 3.04 vs 0.78; P for interaction = .036). There were significant dose-response associations for cigarettes per day (P for trend = .0036), years of smoking (P for trend = 0.023), and pack-years (P for trend = .0023).

“Tobacco smoking was associated with a twofold increased risk of active tuberculosis in a representative cohort of Taiwan’s population,” the study authors write. “The finding that smoking increases the risk of tuberculosis suggests that tobacco control be considered as an important component in the global effort to eliminate tuberculosis.”

Limitations of this study include deaths not recorded in the National Health Insurance database, short duration of follow-up, and lack of data from bacteriologic studies for the diagnosis of tuberculosis.

“Based on the results from our and other observational studies, policy makers and public health personnel should consider addressing tobacco cessation as part of TB [tuberculosis] control,” the study authors conclude. “Recent studies suggest that introducing brief tobacco cessation advice may be feasible among TB patients, and an integrated approach has been proposed to monitor smoking cessation in TB care. From the perspective of prevention, the target of smoking cessation should aim beyond TB patients to reach high-risk populations who are likely to benefit most from cessation.”

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