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This series is coordinated by Sumi Sexton, MD, Associate Deputy Editor.

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pregnancy, smoking history greater than 10 pack-years, or the use of long-term oral steroids. Review of medical records allowed collection of data on the determination of the original diagnosis of asthma. All participants ($N = 701$) underwent assessment with baseline spirometry and continued symptom monitoring using standard tools, as well as serial bronchial challenge testing. Patients using daily medications and not confirmed to have asthma with baseline spirometry or serial bronchial challenge testing had their medications gradually tapered off over four study visits. Patients with continued negative test results for asthma were followed up clinically and with repeated bronchial challenges over one year. Two pulmonologists independently reviewed all medical records to determine agreement with the final diagnosis for all participants. Discrepancies were resolved by consensus agreement with a third reviewer.

A total of 613 patients (87.4%) completed the study assessment procedures. Of these, 203 (33.1%) had a diagnosis of current asthma ruled out. Patients ruled out for current asthma were less likely to be using asthma medications or daily asthma-controlling medications and less likely to have undergone testing performed at the time of initial diagnosis. After one year of follow-up, six patients (2.9%) in the group who were ruled out for current asthma and tapered off their asthma medications presented with respiratory symptoms and resumed treatment. In 12 patients, a serious alternative respiratory diagnosis—including ischemic heart disease, subglottic stenosis, and bronchiectasis—was diagnosed.

Study design: Cohort (prospective)

Funding source: Industry plus government

Setting: Population-based

Reference: Aaron SD, Vandemheen KL, FitzGerald JM, et al.; Canadian Respiratory Research Network. Reevaluation of diagnosis in adults with physician-diagnosed asthma. *JAMA*. 2017;317(3):269-279.

DAVID SLAWSON, MD

Director of Information Sciences
University of Virginia Health System
Charlottesville, Va. ■

One-Third of Adults with Diagnosed Asthma Can Be Weaned Off All Asthma Medications

Clinical Question

How many adults with physician-diagnosed asthma can safely taper off their asthma medications?

Bottom Line

This study found that current asthma was ruled out after repeated testing in one-third of adults with physician-diagnosed asthma. Patients ruled out for current asthma were less likely to be using asthma medications or daily controlling medications and less likely to have undergone testing for airflow limitation at the time of initial diagnosis. After one year of follow-up, 2.9% of the patients who tapered off their asthma medications presented with respiratory symptoms and resumed treatment. (Level of Evidence = 1b)

Synopsis

These investigators randomly dialed landline and cellular phones in Canada to identify a true cohort of adults, 18 years or older, with physician-diagnosed asthma within the previous five years. Exclusion criteria included