Outcomes of immunotherapy tablet for house dust mite allergy-related asthma

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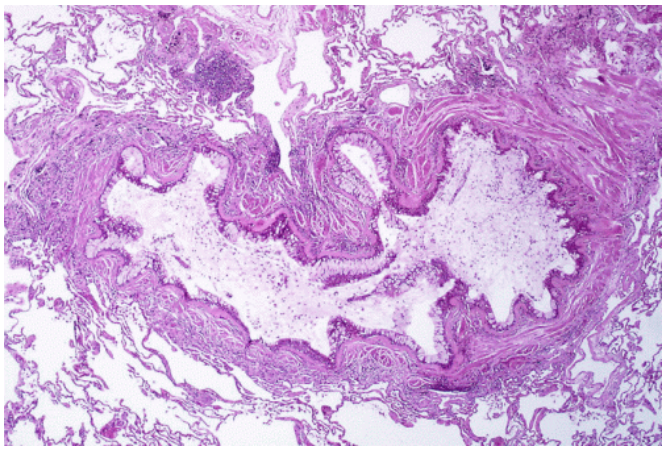

Obstruction of the lumen of a bronchiole by mucoid exudate, goblet cell metaplasia, and epithelial basement membrane thickening in a person with asthma. Credit: Yale Rosen/Wikipedia/CC BY-SA 2.0

The addition of a house dust mite (HDM) sublingual allergen immunotherapy (SLIT) tablet to maintenance medications improved time to first moderate or severe asthma exacerbation during a period of inhaled corticosteroid (ICS) reduction among adults with HDM allergy-related asthma not well controlled by ICS, according to a study appearing in the April 26 issue of *JAMA*.

Bronchial asthma is a serious global health problem with increasing prevalence in many countries. House dust mite sensitization is present in up to 50 percent of patients with asthma, and exposure to HDM allergen has been related to asthma severity. The HDM SLIT tablet is a potential novel treatment option for HDM allergy-related asthma. In this study by J. Christian Virchow, M.D., of the University of Rostock, Germany, and coauthors, 834 adults with HDM allergy-related asthma not well controlled by ICS or combination products, and with HDM allergy-related rhinitis, were randomly assigned to once-daily treatment with placebo (n = 277) or HDM SLIT tablet (different dosage groups, n = 275 or n = 282) in addition to ICS and the short-acting beta2-agonist salbutamol. Efficacy was assessed during the last 6 months of the trial when ICS was reduced by 50 percent for 3 months and then completely withdrawn for 3 months. The study was conducted in 109 European trial sites.

Among the 834 patients, 693 completed the study. The researchers found that either dosage of the HDM SLIT tablet significantly reduced the risk of a moderate or severe asthma exacerbation compared with placebo. Compared with placebo, there was also an increase in allergen-specific immunoglobulin G4 (IgG4; an antibody). However, there was no significant difference for change in the asthma control questionnaire or asthma quality-of-life questionnaire for either dose. There were no reports of severe systemic allergic reactions.

"To our knowledge, this is the first controlled trial to show that adult patients with HDM allergy-related asthma who were not well controlled taking ICS can achieve an improvement in asthma control as measured by time to first asthma exacerbation with a sublingual tablet formulation of HDM allergen immunotherapy," the authors write.

They add that further studies are needed to assess long-term efficacy and safety.

"Rigorous studies of immunotherapy of all forms are clearly needed. The study by Virchow et al is a valuable contribution to the literature, especially given its focus on an important patient population with highly relevant end points," writes Robert A. Wood, M.D., of the Johns Hopkins University School of Medicine, Baltimore, in an accompanying editorial.

"The work should not end here, as there is still a great deal of room for refinement in the practice of immunotherapy. As research continues and these

therapies enter clinical practice, the goal should be to optimize each patient's immunotherapy regimen and disease control, taking personal preferences into account, and ideally to develop additional patient profiling using specific biomarkers to further personalize the use of these treatment options."

More information: *JAMA*, DOI: 10.1001/jama.2016.3964

JAMA, DOI: 10.1001/jama.2016.4078