

For the Patient

The full report is titled “Visceral obesity is associated with clinical and inflammatory features of asthma: A prospective cohort study.” It is in the September 2020 issue of *Allergy Asthma Proceedings* (volume 41, pages 348 to 356). The authors are Ke Deng, Xin Zhang, Ying Liu, Gai Ping Cheng, Hong Ping Zhang, Ting Wang, Lei Wang, Wei Min Li, Gang Wang, Lisa Wood.

For the Patient is provided to physicians so that the patients can better understand the language of modern medicine.

For the Patient is written by the editors (Bellanti, JA and Settignano, RA) and provided to practitioners so that patients can better understand the usefulness of new information resulting from medical research.

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Obesity is associated with asthma

In recent years, obesity has increased dramatically and has been reported to be associated with an increased risk for asthma. Several epidemiologic studies have confirmed that obesity is associated with severity, treatment response, and control of asthma. The mechanisms responsible for this association have included limited lung function, increased airway reactivity, inflammation, and, most recently, the bacteria found in the gastrointestinal tract referred to as the gut microbiome. Although these factors have been identified, the association between obesity and asthma is complex, and precise mechanisms that predispose patients who are obese and with asthma are not known with certainty. In a recent report, Deng and associates, from the Department of Respiratory and Critical Care Medicine, Sichuan University, Sichuan, China, studied the association of body fat area and clinical features of asthma.

Why Did the Researchers Do This Particular Study?

To study the factors that associate obesity with asthma and to critically explore the possible effects of body fat on the future risk of asthma exacerbations in patients who are obese.

Who or What Was Studied?

A total of 417 patients with obesity were enrolled in this study and were divided into one group with a high degree of obesity (VFA^{high}) and a second group with a lower degree of obesity (VFA^{low}). Blood and saliva samples were studied for the presence of inflammatory molecules that promote inflammation called cytokines.

How Was the Study Done?

A higher content of the inflammatory cytokines and higher white blood counts were found in the VFA^{high} group than in the VFA^{low} group. A total of 377 patients (90.4%) who completed the 12-month follow-up showed that the patients in the VFA^{high} group were found to have a higher incidence and frequency of severe exacerbations of asthma than in the patients in the VFA^{low} group.

What Were the Limitations of the Study?

The measurements of VFA were performed only once at the beginning; also, medication exposure for these included patients within a 12-month period was not analyzed in the the two study groups.

What Are the Implications of the Study?

This study identified that patients with elevated VFA had longer asthma duration, elevated total white blood cell counts, and a larger amount of inflammatory cytokines. Furthermore, patients in the VFA^{high} group were at increased risk of moderate-to-severe exacerbations and emergency department visits. Results of this study suggest that the measurement of these biomarkers in patients who are obese would provide more useful potential clinical implications for asthma management. □