Obesity Is Stronger Asthma Risk Factor in Women

BY BRUCE JANCIN
Denver Bureau

KEYSTONE, COLO. — Obesity appears to be modestly associated with subsequent development of asthma, particularly in women, Dr. David A. Beuther reported at a meeting sponsored by the National Jewish Medical and Research Center.

His metaanalysis of data from the Nurses' Health Study and six other large prospective studies totaling well over 200,000 subjects with 2- to 10-year follow-up concluded that women who became overweight or obese were 68% more likely to develop asthma within 1 year than those who maintained a body mass index (BMI) below 25 kg/m^2.

In men, a BMI greater than 25 was associated with a 46% increase in incident asthma in 1 year, according to Dr. Beuther of the Denver center.

All seven of the prospective studies showed a positive relationship between obesity and asthma. In many of the studies, the relationship didn't achieve statistical significance; however, when the data were pooled, the results became highly significant.

A major caveat regarding the putative obesity-asthma link is that most studies to date have relied on self-reported asthma or physician-diagnosed asthma without confirmatory pulmonary testing. The question arises: Do these heavy patients truly have asthma, or do they merely develop asthmalike symptoms of wheezing and shortness of breath due to obesity-induced chest wall restriction?

Dr. Beuther is conducting a bronchoscopic study designed to answer this question, as well as to better characterize the airway inflammation present in obese asthmatic patients. He has found that many obese patients who carry the diagnosis of asthma don't actually have the disease upon rigorous testing.

And yet the obesity-asthma relationship certainly has biologic plausibility. Obesity is at its essence a systemic inflammatory state. Receptors for leptin, a proinflammatory cytokine produced by adipocytes, are found in the lungs. It is possible that the upregulated systemic inflammatory state of obesity spills over to contribute to airway inflammation and asthma.

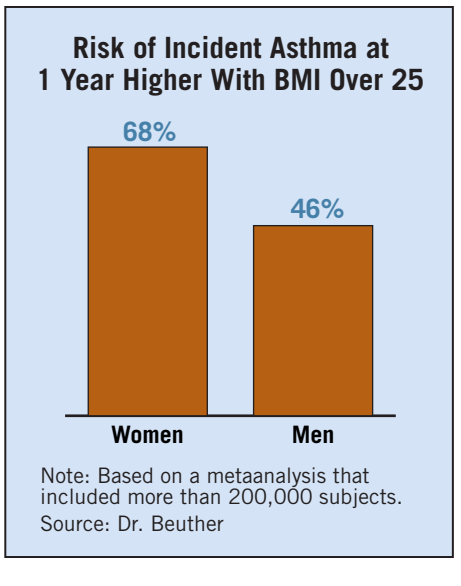
Many obese patients who carry the diagnosis of asthma don't actually have the disease upon rigorous testing.

DR. BEUTHER

A couple of relatively small studies in asthmatic children are supportive. In one, 23 asthmatic children were found to have higher leptin levels than controls—and their leptin levels dropped to that of controls within several weeks after going on inhaled corticosteroid therapy (Ann. Allergy Asthma Immmunol. 2004;93:277-80). And in a study of 102 asthmatic children, elevated leptin was associated with a twofold increased prevalence of asthma. Atopic asthmatics had significantly higher leptin levels than nonatopic asthmatics (J. Allergy Clin. Immunol. 2004;114:254-9).

In addition, recent preliminary data suggest obesity and asthma share four chromosome loci, Dr. Beuther continued.

Assuming obesity is an independent risk factor for asthma, it is reasonable that obese asthmatics who lose weight should experience improvement in their respiratory disease. The single randomized, controlled, 38-patient study of medical weight loss and asthma performed to date showed a positive correlation. ■



ADVERTISEMENT

The IRLS rating scale assesses severity of RLS symptoms

Assessing symptom severity is an accepted way to determine the impact of RLS on patients and to ascertain whether therapy is addressing the broad range of RLS symptoms. The IRLS rating scale clinically assesses symptoms and evaluates therapeutic efficacy in RLS. It addresses ten RLS characteristics, including five that pertain to symptom frequency and intensity and five that pertain to the impact of symptoms on daily life and sleep (total score ranges from 0 to 40).[5,6]

Patients with RLS need relief from the broad range of symptoms

RLS is more than a leg disorder or a sleeping problem. Its broad range of symptoms requires therapy that treats the entire scope of the condition, providing quantifiable relief that can be appropriately assessed using the IRLS rating scale.

The IRLS rating scale will continue to provide valuable assessment of RLS symptom relief. For patients who have spent years grappling with the daily and nightly disruptions caused by the broad range of RLS symptoms, the existence of measurable relief could be welcome news.

ESSENTIAL CRITERIA REQUIRED FOR RLS DIAGNOSIS[4]

1. Urge to move legs—usually accompanied by uncomfortable leg sensations
2. Onset or worsening of symptoms at rest or during inactivity—such as when lying down or sitting
3. Urge to move is partially or totally relieved with movement—such as walking or stretching
4. Worsening of symptoms in the evening and at night

THE IRLS RATING SCALE EVALUATES THE FOLLOWING 10 CHARACTERISTICS[5]

1. RLS discomfort in the legs or arms
2. The need to move around because of RLS
3. Relief of RLS arm or leg discomfort from moving
4. Sleep disturbance due to RLS
5. Daytime tiredness or sleepiness due to RLS
6. Severity of RLS as a whole
7. Frequency of RLS symptoms
8. Severity of RLS symptoms on average
9. The impact of RLS symptoms on daily activities
10. Mood disturbance due to RLS

*SF-36 is a registered trademark of the Medical Outcomes Trust.

References: 1. Hening W, Walters AS, Allen RP, et al. Impact, diagnosis and treatment of restless legs syndrome (RLS) in a primary care population: the REST (RLS epidemiology, symptoms, and treatment) primary care study. *Sleep Med.* 2004;5:237-246. **2.** Abetz L, Allen R, Follet A, et al. Evaluating the quality of life of patients with restless legs syndrome. *Clin Ther.* 2004;26:925-935. **3.** National Heart, Lung, and Blood Institute Working Group on Restless Legs Syndrome. Restless legs syndrome: detection and management in primary care. *Am Fam Physician.* 2000;62:108-114. **4.** Allen RP, Picchietti D, Hening WA, et al. Restless legs syndrome: diagnostic criteria, special considerations, and epidemiology. A report from the restless legs syndrome diagnosis and epidemiology workshop at the National Institutes of Health. *Sleep Med.* 2003;4:101-119. **5.** The International Restless Legs Syndrome Study Group. Validation of the International Restless Legs Syndrome Study Group rating scale for restless legs syndrome. *Sleep Med.* 2003;4:121-132. **6.** Allen RP, Kushida CA, Atkinson MJ, RLS QoL Consortium. Factor analysis of the International Restless Legs Syndrome Study Group's scale for restless legs severity. *Sleep Med.* 2003;4:133-135.