

Cautiously Diagnose Asthma in Dyspnea Patients

When patients present with dyspnea, do exhaled nitric oxide and methacholine challenges.

BY DOUG BRUNK
San Diego Bureau

SAN DIEGO — Asthma may be overdiagnosed in many obese African American women who present with dyspnea, results from a small pilot study suggest.

The finding is important because the incidence rates of asthma and obesity have increased over the last 20 years, especially among African American women, Dr. Daniel Waggoner reported during a poster session at the annual meeting of the American Academy of Allergy, Asthma, and Immunology.

"If somebody gives you a very good history of asthma symptoms, sometimes it's a little bit easier to make the diagnosis," Dr. Waggoner, of the division of allergy and immunology at Creighton Uni-

versity, Omaha, Neb., said in an interview.

"But if somebody comes in with rather nebulous symptoms, it's very important to get some objective testing to make a diagnosis [of asthma], because many medications [for it] have side effects, and they're expensive," Dr. Waggoner continued.

He and his associates evaluated 18 African American women aged 19-50 years who live in or near Omaha and who had a physician diagnosis of asthma for at least 3 months. All had a body mass index (kg/m²) of 30 or greater, an FEV₁ (forced expiratory volume in 1 second) value of 65% or greater, and symptoms of dyspnea.

Over the course of three office visits, the researchers performed the following

measurements in each patient to verify the asthma diagnosis: spirometry with postbronchodilator values, exhaled nitric oxide (eNO), methacholine challenges, and full-body plethysmography. Each of the four tests was considered a positive criterion for the diagnosis of asthma.

Dr. Waggoner reported that of the 18 patients, only 8 (44%) had a positive methacholine challenge, 1 (6%) had demonstrated airway reversibility on spirometry, 10 (56%) had elevated eNO, and 6 (33%) had airflow obstruction as measured by plethysmography.

No patient met all four criteria for the diagnosis of asthma, and only 39% met two or more of the criteria.



"Only one patient did not have an albuterol prescription," Dr. Waggoner added during the interview. "I was really surprised that we didn't have at least a handful more [who] demonstrated reversibility with albuterol or a bronchodilator."

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DR. WAGGONER

In their poster, the researchers concluded that in African American women who present with dyspnea, "an eNO and methacholine challenge should be considered to confirm or refute the diagnosis of asthma. Full-body plethysmography may provide clues to etiologies of dyspnea other than asthma, [such as physiologic air trapping] associated with obesity."

The study was funded by the State of Nebraska Tobacco Settlement. ■

Theophylline, Ipratropium Increase Mortality in COPD

BY ROBERT FINN
San Francisco Bureau

SAN FRANCISCO — Patients with chronic obstructive pulmonary disease do worse when their regimens include theophylline or ipratropium, according to two poster presentations by Todd A. Lee, Pharm.D., at the International Conference of the American Thoracic Society.

In the first study, ipratropium (Atrovent) was associated with an adjusted 45% increased relative risk of death over 2.5 years, and theophylline was associated with an adjusted 23% increased relative risk of death, wrote Dr. Lee and his colleagues at Northwestern University, Chicago.

On the other hand, the use of inhaled corticosteroids was associated with an adjusted 13% decrease in the relative risk of death.

In the second study, all patients taking multidrug regimens that included theophylline had significantly higher mortality rates than did patients taking the same regimen without theophylline.

For example, the adjusted increased relative risk of death of a regimen including inhaled corticosteroids, long-acting β -agonists, and theophylline was 31% compared with a regimen including just inhaled corticosteroids and long-acting β -agonists.

In many of the regimens, the addition of theophylline also was associated with a significant increase in the rate of chronic obstructive pulmonary disease exacerbations.

Both of the studies involved a retro-

spective analysis of patients with chronic obstructive pulmonary disease in the Veterans Affairs health care system, Dr. Lee explained.

The first study used a random sample of 7,840 of these patients, and the second study used all 169,842 patients divided into six treatment groups based on their medication regimens.

Each of the treatment groups included at least 10,000 patients.

The results were adjusted for age, the chance that patients were receiving theophylline at baseline, and COPD exacerbations in the preceding 6 months.

The ipratropium finding is consistent with other studies that have raised concerns about the safety of this agent, the investigators wrote.

Tiotropium (Spiriva), a similar anticholinergic, has recently been introduced, the investigators noted.

Regarding theophylline, the investigators noted that their studies did not include quality of life measures or the potential benefits of theophylline on the activities of daily living.

"However," they wrote, "in order to justify the use of theophylline in patients with COPD it would have to have substantial benefits in those areas to overcome the potential risk that may be associated with the use of this medication."

Dr. Lee disclosed that he is the recipient of research grants from a consortium of pharmaceutical companies for investigations involving chronic obstructive pulmonary disease. ■

Breathing, Relaxation Improve Asthma Patients' Symptoms

BY JONATHAN GARDNER
London Bureau

Breathing and relaxation training added to usual asthma treatment improved patients' respiratory symptoms, dysfunctional breathing, and mood better than did usual asthma care alone, according to a British randomized controlled trial.

The researchers studied the effect of exercises collectively known as the Papworth method on asthma patients in a general practice in the town of Welwyn in Hertfordshire, England.

The Papworth method has five components: breathing training (including development of proper breathing patterns and elimination of hyperventilation and "mouth-breathing" habits); education; general and specific relaxation training; integration of breathing and relaxation techniques into daily living activities, including speech; and home exercises with reminders of the techniques, the researchers wrote.

A total of 85 patients aged 16-70—most of whom had mild asthma or symptoms that were well controlled by medication—were randomized into a control group or an intervention group that received five sessions of treatment using the Papworth method (Thorax 2007 June 28 [Epub doi:10.1136/thx.2006.076430]). Both groups continued to receive routine asthma medication and education during the study.

At 6 months, mean scores on a per-protocol basis on the St. George's Respiratory Questionnaire symptoms scale dropped from 42.9 to 21.8 in the intervention group, compared with a change from 35.1 to 32.8 for the control group. At 12 months, the scores were 24.9 for the intervention group and 33.5 for controls, researchers found. The changes

were significantly greater in the intervention than in the control group.

The researchers also found significant improvements in intervention group versus control group scores on the Hospital Anxiety and Depression Scale anxiety and depression components, as well as in scores for hypocapnic symptoms on the Nijmegen questionnaire.

"These results support the hypothesis that the Papworth method ameliorates respiratory symptoms and improves quality of life in a general practice population of patients diagnosed with asthma," wrote the researchers, Elizabeth Holloway and Robert West of University College London's department of epidemiology and public health. "To our knowledge, this is the first evidence from a controlled trial to demonstrate the effectiveness of the Papworth method."

Papworth method patients significantly improved their relaxed breathing rate over 10 minutes compared with the usual care group. The researchers did not find any significant improvement in spirometric parameters for the intervention patients, however.

"The fact that no significant change was observed in objective measures of lung function suggests that the Papworth method does not improve the chronic underlying physiological causes of asthma, but rather their manifestation," they wrote.

The researchers acknowledged that their study did not track medication use or changes in medication use, nor does it compare the Papworth method with other treatment options that exceed usual care. In addition, the researchers said they could draw no conclusions about the Papworth method's effectiveness for those with severe asthma, because such patients were not included in the study. ■