

CHEST News Release



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NEW 20-YEAR STUDY LINKS COPD AND ASTHMA

Asthmatics 12 Times More Likely to Develop COPD Than Nonasthmatics

(NORTHBROOK, IL, July 12, 2004) – New research shows that adults with asthma may have an increased risk of developing chronic obstructive pulmonary disease (COPD). According to a 20-year study published in the July issue of *CHEST*, the peer-reviewed journal of the American College of Chest Physicians (ACCP), patients with asthma were 12 times more likely than nonasthmatics to develop COPD later in life.

“For many years, asthma and COPD have been regarded as distinct conditions, with separate clinical courses. However, over time, the two diseases may develop features that are quite similar. Our study shows a strong link between asthma diagnosis and the development of COPD, which suggests they may share a common background,” said the article’s lead author Graciela E. Silva, MPH, University of Arizona, College of Medicine, Tucson, AZ. “It is possible that factors such as smoking and repeated episodes of acute bronchitis may facilitate the evolution of asthma into COPD, but the process by which asthma and COPD become comorbid conditions is not clear.” COPD is a collective name for a group of chronic lung diseases, including emphysema and chronic bronchitis, characterized by irreversible airflow limitation and permanent lung damage. Asthma is a chronic disease in which the airways become inflamed, causing airflow obstruction and difficulty breathing. Unlike COPD, it is thought that asthma does not lead to permanent lung damage and symptoms can usually be relieved spontaneously or with medication.

University of Arizona researchers assessed whether an active asthma diagnosis is a predictor of a future diagnosis of emphysema, chronic bronchitis, or COPD (emphysema and/or chronic bronchitis and pulmonary function test results less than 80 percent of predicted). Researchers analyzed survey data obtained from 3,099 Caucasian community subjects enrolled in the Tucson Epidemiologic Study of Airway Obstructive Disease between 1972 and 1973. Patients at least 20 years of age upon enrollment were initially assessed for asthma, allergies, and potential confounders, including age, sex, and smoking status. Of the

patients, 192 currently had asthma (active asthma), 156 were previously diagnosed with asthma but no longer experienced symptoms (inactive asthma), and the remaining patients did not have asthma. All patients had negative findings for chronic bronchitis and emphysema at initial survey. Over the next 20 years, 12 periodic follow-up surveys and lung function tests were administered. Study results showed that patients with active asthma were 10 times more likely to acquire symptoms of chronic bronchitis, 17 times more likely to receive a diagnosis of emphysema, and 12.5 times more likely to develop COPD than patients without asthma. No association was found between inactive asthma and the lung conditions. Age and current smoking were significantly associated with an increased risk of acquiring COPD, emphysema, or chronic bronchitis.

“Although most people living with COPD have a history of smoking, the majority of smokers do not develop COPD later in life, suggesting that other factors, such as genetic, occupational, or environmental conditions, convey significant risks,” said Dr. Silva. “For people with asthma, minimizing exposure to risk factors like tobacco smoke and air pollution may delay disease progression to COPD. Effective antiinflammatory therapy at the onset of asthma may also decrease the likelihood of COPD developing years later,” added article coauthor Robert A. Barbee, MD, FCCP, University of Arizona, College of Medicine. Researchers caution that more research is needed to understand risk factors for onset and progression of COPD.

No significant associations were found between childhood and adulthood asthma onset and risk of acquiring chronic bronchitis, emphysema, or COPD. Similarly, no significant association was found between asthma duration and risk for lung disease. Overall, patients with active asthma died at a younger age and had significantly fewer follow-up years than those with inactive or no asthma. In addition, male subjects were more likely to acquire emphysema and die at a younger age than women.

“Although there is no cure for COPD, early detection is critical in slowing disease progression,” said Richard S. Irwin, MD, FCCP, President of the American College of Chest Physicians. “Understanding the relationship between COPD and other chronic lung diseases, such as asthma, may lead to early disease detection, as well as more effective treatments for patients with COPD.”

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NEW PULMONARY HYPERTENSION GUIDELINE CHALLENGES USE OF COMMON MEDICATION

Genetic Testing Recommended in Patients With Family History of Pulmonary Hypertension

(NORTHBROOK, IL, July 12, 2004) – A new evidence-based guideline for pulmonary arterial hypertension (PAH) cautions the use of calcium channel blockers, a commonly used treatment for high blood pressure, in unstable patients due to the potentially fatal side effects associated with the medication. PAH is a life-threatening condition that occurs when the arteries that supply blood to the lungs become constricted, limiting the blood flow to the lungs and, ultimately, causing high blood pressure to develop within the lung arteries.

The American College of Chest Physicians (ACCP) *Diagnosis and Management of Pulmonary Arterial Hypertension: ACCP Evidence-Based Clinical Practice Guideline* provides recommendations for diagnosing and treating PAH. Published in the July issue of *CHEST*, the peer-reviewed journal of the ACCP, the guideline was developed by a multidisciplinary panel of experts from five medical specialties and is endorsed by the American College of Cardiology Foundation, American College of Rheumatology, American Heart Association, and the Pulmonary Hypertension Association. Panel members recommend against the empiric use of calcium channel blockers or their use in patients who do not respond to acute pulmonary vasodilator testing, citing an increased risk of adverse and potentially fatal events related to the use of the medication. Due to the severity of the disease, the panel also advises genetic testing for patients with a family history of PAH and advance screening for patients with certain chronic diseases who are predisposed to PAH.

“Calcium channel blockers are regularly used to treat high blood pressure because they limit calcium entry into the cells and dilate the constricted systemic blood vessels, thereby lowering blood pressure. This rationale is frequently applied to their use in PAH; however, when they are used in patients with PAH whose narrowed pulmonary arteries are not caused by dynamic vessel constriction, the side effects can be fatal,” said Panel Chair Lewis J. Rubin, MD, FCCP, University of California San Diego School of Medicine, La Jolla, CA. “When left untreated, PAH can cause serious health problems, such as difficulty breathing, blood clots, and fluid retention due to right-sided heart failure. Moreover, patients in specific populations, such as women who are pregnant and patients with respiratory disease, are at greater risk of developing severe complications as a result of PAH. Genetic testing can help to identify patients who are most at risk for developing PAH, allowing clinicians to closely monitor patients and begin treatment at the first sign of the disease.”

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The evidence-based guideline is based on a structured review of all available guidelines and published research related to PAH. The guideline provides specific recommendations for screening, early detection and diagnosis, medical therapies, surgical interventions, sleep-disordered breathing, and prognosis of PAH. Recommendations were graded in regard to the quality of evidence available or expert opinion and the benefit of the diagnostic or therapeutic procedure for the patient population. Aside from genetic testing, the guideline recommends that patients with unexplained PAH undergo testing for connective tissue disease and HIV infection, conditions that may predispose patients to PAH. Patients who are evaluated for PAH also are advised to undergo assessment for sleep-disordered breathing, a potential independent risk factor or complicating factor for PAH. In addition, the guideline supports the continued use of right-heart catheterization to confirm the presence of PAH and establish the severity of the disease. In regard to medical therapies, the guideline recommends that women with PAH avoid becoming pregnant due to the high maternal and fetal mortality rates associated with the disease.

“There are many misconceptions about PAH, since it is relatively uncommon, leading to inappropriate reliance on some tests and treatments. In addition, symptoms of PAH are similar to other respiratory diseases, such as asthma, and can remain subtle for months or even years. These issues have made diagnosing and managing PAH more difficult and the need for early and accurate testing crucial,” said Dr. Rubin. “The extensive published research on PAH over the past few years affords the development of guidelines that are based on data and experience for a very serious disease. When implemented, the guidelines can lead to earlier and more accurate diagnosis of PAH and more appropriate application of therapies now available.”

Although the true incidence of PAH is unknown, it is estimated that over 100,000 people in the United States suffer from PAH and several thousand new cases are diagnosed each year. Pulmonary hypertension can develop in patients of all ages and ethnic groups, and both genders; however, women ages 20 to 40 have the highest incidence of PAH.

“Evidence-based medicine provides a systematic way of practicing medicine based on a comprehensive review of clinical research findings,” said Richard S. Irwin, MD, FCCP, President of the American College of Chest Physicians. “The new evidence-based guideline for pulmonary hypertension combines clinical expertise with extensive external evidence that will enable health-care professionals to practice more effective patient-focused care.”

The development of *Diagnosis and Management of Pulmonary Arterial Hypertension: ACCP Evidence-Based Clinical Practice Guideline* was supported by unrestricted educational grants from Actelion Pharmaceuticals US, Inc., Encysive Pharmaceuticals, and GlaxoSmithKline. To order a copy of the guidelines or for more information, contact the ACCP at 800-343-ACCP (2227) or visit the ACCP Web site at www.chestnet.org.

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HEART ATTACKS WITHOUT CHEST PAIN MORE OFTEN FATAL *Atypical Cardiac Patients Not Given Proper Drugs or Hospital Treatments*

(NORTHBROOK, IL, August 9, 2004) – People who have heart attacks or other heart conditions who do not experience chest pain are commonly overlooked and undertreated at the hospital, often resulting in greater fatality rates in this group of patients. A new study in the August issue of *CHEST*, the peer-reviewed journal of the American College of Chest Physicians, shows that cardiac patients presenting to the hospital without chest pain have triple the death rate of other cardiac patients and are less likely to receive medications to slow the progression of a heart attack.

“While the majority of people who have acute coronary syndromes, such as heart attacks and unstable angina, feel chest pain, some do not, but, instead, may experience atypical symptoms of fainting, shortness of breath, excessive sweating, or nausea and vomiting” said the study’s lead author, David Brieger, MBBS, PhD, Concord Hospital, Sydney, Australia. “Other than excessive sweating, each of the dominant symptoms of a heart attack not accompanied by chest pain independently identifies a population that is at increased risk of dying.”

A group of international researchers analyzed data from the Global Registry of Acute Coronary Events (GRACE), a registry of 20,881 patients from 14 countries, including the United States, Canada, Australia, Great Britain, and France. These patients were hospitalized with a variety of heart conditions from July 1999 to June 2002. Of the 1,763 cardiac patients who did not experience chest pain, 13 percent died in the hospital compared to 4.3 percent of those with chest pain. In addition, 23.8 percent of patients without chest pain were initially misdiagnosed when they arrived at the hospital, compared to only 2.4 percent of heart patients who experienced typical symptoms. Patients without chest pain tended to be older women and to have a history of diabetes, heart failure, or hypertension, as opposed to patients with chest pain who were more likely to be smokers with plaque buildup in their coronary arteries. Patients with atypical symptoms were also

more likely to have the unfavorable outcomes of heart failure, cardiogenic shock, arrhythmias, and renal failure.

“Often, when a patient arrives at the hospital without chest pain, it is only after blood test results come back or other diagnoses are excluded that the physician reassesses the situation and determines it is an acute cardiac event after all,” said Professor Brieger. “We hope that our findings will remind physicians that these events do occur in the absence of chest pain and will prompt them to make the diagnoses and institute the appropriate treatment more rapidly.”

Researchers also discovered that patients who did not experience chest pain were often not given proper medication or offered appropriate cardiac medical procedures. Drugs such as aspirin and beta-blockers are usually given to patients with heart problems when they arrive at the hospital because they act as blood thinners, lessen the burden on the heart, and decrease the chances of a future coronary event; yet patients who did not have chest pain were significantly less likely to receive these drugs both during their first 24 hours of hospitalization and throughout their hospital stay. These patients were also less likely to undergo procedures such as coronary angiography and percutaneous coronary intervention and were less likely to receive statins at hospital discharge.

“The current gap in treatment and hospital outcomes for patients with atypical symptoms is a problem that needs to be rectified,” said Richard S. Irwin, MD, FCCP, President of the American College of Chest Physicians. “More emphasis needs to be given to identifying and properly treating heart attacks in patients who do not exhibit typical symptoms.”

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THROMBOSIS GUIDELINES OFFER NEW RECOMMENDATIONS FOR TRAVELERS *New Guidelines Advise Against Previously Recommended Antiplatelet Therapy*

(NORTHBROOK, IL, September 13, 2004) – New antithrombotic guidelines from the American College of Chest Physicians (ACCP) introduce novel therapies for the prevention and treatment of thrombosis and, for the first time, offer specific recommendations for long-distance travelers. The guidelines also update previously issued recommendations and emphasize the overall need for stronger implementation of the guidelines in the clinical setting.

Over 500 evidence-based recommendations from The Seventh ACCP Conference on Antithrombotic and Thrombolytic Therapy were developed by a nationwide panel of 87 physicians and are published in the September supplement to *CHEST*, the official peer-reviewed publication of the ACCP. Antithrombotic and thrombolytic therapies are used to prevent thrombosis or blood clotting in an artery, vein, or the heart. Thrombosis can ultimately lead to potentially fatal blockage in the lung, known as venous thromboembolism (VTE).

“This is an exciting time for the field of thrombosis. Since the last guidelines were published in 2001, rigorous studies have resulted in new and stronger evidence-based recommendations for many indications, including those for stroke and coronary artery disease,” said Panel Chair Jack Hirsh, MD, FCCP, Henderson Research Center, Hamilton, ON, Canada. “The new guidelines not only offer an update of recommendations from previous years, but they also provide a look into the new therapies that are now available and a preview of groundbreaking therapies that are still in development.”

New Recommendations

Approximately 230 new, graded recommendations have been added to the guidelines, including those related to new therapies and the prevention of thrombosis during long-distance travel. A new anticoagulant, fondaparinux, is recommended as a practical alternative to the standard anticoagulant, low-molecular-weight heparin (LMWH), for it does not compromise safety or effectiveness, yet has a longer half-life, a more predictable response, and fewer side effects than LMWH. Not mentioned in previous guidelines, fondaparinux also has received three of the strongest recommendations for the drug’s use during the orthopedic procedures of hip and knee arthroplasty.

For the first time, the guidelines include formal recommendations on how long-distance travelers can avoid thrombotic events. Specific recommendations include:

- For flights longer than six hours, patients, with or without risk for VTE, should avoid constrictive clothing around the lower extremities and waist, avoid dehydration, and engage in frequent calf muscle stretching.
- Patients at risk for VTE should consider using a graduated compression stocking or receiving a dose of LMWH or fondaparinux prior to departure.
- Aspirin is not recommended for the prevention of VTE associated with travel.

“There is much speculation about the occurrence and treatment of deep vein thrombosis, or ‘economy class syndrome,’ that can occur in patients spending several hours on a plane,” said Dr. Hirsh. “Although prevention is often focused on at-risk patients, such as women who are pregnant or patients who have recently had surgery, we strongly advise all patients traveling on flights of more than six hours to take the necessary precautions to prevent thrombosis.”

The panel describes the guideline development process and the assessment and grading of the quality of evidence and strength of recommendations in separate chapters. The novel approach used to develop the evidence-based recommendations, is one of the important and defining features of these guidelines.

Panel members also dedicate an entire chapter to guideline application, which provides an overview of the importance of implementation and strategies for medical professionals and institutions to implement the guidelines into practice. Within the guidelines, panel members reviewed the inconsistencies involved in application of the guidelines and the resulting adverse events.

“Despite the overwhelming evidence that ACCP antithrombotic recommendations are effective, many physicians are inconsistent when applying the guidelines, which may lead to adverse events,” said Panel Co-Chair Holger Schunemann, MD, PhD, University of Buffalo, Buffalo, NY. “The new recommendations for implementation offer health-care professionals ways of applying the guidelines to clinical practice that will help improve patient care outcomes in the process.” To improve guideline implementation, panel members recommend that considerable resources be dedicated to the distribution of physician and patient educational material about the guidelines, as well as automatic computer reminders for physicians prescribing antithrombotic therapies.

Revised Recommendations

The guidelines also include revised and recurring recommendations for antithrombotic therapy, including those related to coronary artery disease and stroke. For coronary interventions, revised recommendations advise against the use of the antiplatelet ticlopidine when other treatments are available. Although recommended in previous guidelines as a first-line therapy, ticlopidine recently has been linked to many, and sometimes deadly, side effects. In addition, for most patients who suffer from unstable angina or a minor heart attack, the antiplatelet clopidogrel, in combination with aspirin, is recommended. For patients with non-heart-related stroke, panel members reinforce the previous guideline that the blood clot-dissolving agent, tissue plasminogen activator, be used only within three hours of stroke onset. In addition, guidelines recommended against the sole use of aspirin as a preventative therapy for thrombosis for any patient group.

“With each revision, the ACCP evidence-based antithrombotic guidelines become more refined and more relevant to each health-care specialty,” said Richard S. Irwin, MD, FCCP, President of the American College of Chest Physicians. “To ensure the most effective and patient-focused care, it is essential for all health-care providers to become familiar with the guidelines and take active steps to implement the guidelines in their practice.”

To order guidelines from The Seventh ACCP Conference on Antithrombotic and Thrombolytic Therapy call (800)-343-2227 or access online at www.chestjournal.org.

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