Adult Acute Care Bulletin

May/June '00

American Association for Respiratory Care

nCPAP Precludes Reintubation

Using nasal continuous positive airway pressure (nCPAP), German investigators successfully restored systemic oxygen levels and significantly reduced the chance of death in postsurgical patients who had gone into acute respiratory failure following removal from mechanical ventilation.

Detlef Kindgen-Milles, MD, along with four associates from the department of clinical anesthesiology at heinrich-Heine-University in Dusseldorf, used nCPAP almost continuously on 20 consecutive patients in the intensive care unit (ICU). Within one hour, nCPAP substantially increased systemic blood oxygenation. All patients had been put on mechanical ventilation after undergoing severe thoracic, abdominal, or thoracoabdominal surgery.

Noting that reintubation in this group of patients can increase the mortality rate of the patient by sevenfold, Dr. Kindgen-Milles points out that, "Avoiding endotracheal intubation and mechanical ventilation by noninvasive ventilatory support can significantly reduce infectious complications, cut the length of ICU stay, and reduce mortality in patients with acute respiratory failure." All 20 of the patients in the study met the predefined criteria for reintubation because of severe respiratory failure following their removal from mechanical ventilation. During the study, only two patients had to be reintubated for reasons unrelated to oxygenation or ventilation, according to the authors.

During the first day of treatment, nCPAP was never stopped for more than 30 minutes. Later, to enhance nursing care, clinicians allowed patients to have three to four periods per day of less than 30 minutes each without nCPAP. "Our earlier use of intermittent CPAP could not stop or reverse the continuing deficiency in blood oxygenation, or hypoxemia, so a continuous form of therapy was needed," explains Dr. Kindgen-Milles.

According to the authors, institution of nCPAP with a continuous flow of oxygen is simple and can be started within minutes, not only in the ICU, but also on intermediate care wards. They believe a trial of nCPAP can be initiated in almost any patient with hypoxemic respiratory failure prior to performing endotracheal intubation. This is especially true when the patient does not have a serious excess of carbon dioxide (CO2) in the blood together with respiratory acidosis due to excessive retention of CO2.

The researchers say the technique should be undertaken in patients with deteriorating pulmonary oxygen transfer before hypoxemia is manifest, unless immediate endotracheal intubation is required for other reasons. Should pulmonary oxygen transfer not improve within the first hour of continuous nCPAP, they say further improvements are unlikely and intubation and mechanical ventilation should not be delayed further.

The average age of the study patients was 60 years. There were 13 males and seven females involved in the clinical trial. (CHEST, 4/00) n

Statement Urges Office Spirometry

A just-released consensus statement calls for more widespread use of office spirometry to detect chronic obstructive pulmonary disease (COPD) in its most treatable stage, particularly in smokers over 45 years old.

The statement was released by the National Lung Health Education Program (NLHEP) in the peer-reviewed journal, CHEST in April and in RESPIRATORY CARE in May. The NLHEP is sponsored by several medical professional groups, including the AARC and the American College of Chest Physicians (ACCP), which publishes CHEST.

According to the statement, COPD is currently the fourth leading cause of death in the United States. Of the top ten causes of death, only COPD mortality continues to rise, increasing by 22% in the last decade. Its prevalence is now rising faster in women than men. Every year it causes 100,000 deaths and 550,000 hospitalizations.

The consensus statement notes that the widely accepted definition of COPD progression is an abnormal rate of decline in lung function. Prevalence rates of low function increase with age and are highest in current smokers,

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intermediate in former smokers, and lowest in never smokers. Data from the multi-center Lung Health Study (LHS) showed that an intense smoking cessation effort can lead to a quit rate of 35% in asymptomatic smokers and that the rate of decline of FEV_1 following cessation is very similar to that seen in healthy nonsmokers.

The LHS was the first study to demonstrate prospectively that early intervention in smokers identified to be at risk of COPD could modify the natural history of the disease. However, primary care physicians rarely use spirometry to detect COPD early in smokers.

In an effort to increase the use of spirometry among primary care physicians, the consensus statement calls for the widespread use of the new office spirometers, which differ somewhat in specifications from the more traditional spirometers used for diagnosis. The new office spirometers are less expensive, smaller in size, require less effort to perform the test, have improved ease of calibration, and have an improved quality assurance program. While traditional diagnostic spirometers currently cost about $2,000 each and require about $10 of health care professional time and disposable supplies per test, office spirometers will cost less than $800 and require less testing time.

The consensus statement called on primary physicians to use office spirometry on all patients 45 or older who smoke. Discussion of the spirometry results with smokers, they add, should be accompanied by strong advice to quit smoking and referral to local smoking cessation resources. Office spirometry was also recommended for patients with respiratory symptoms such as chronic cough, sputum production, wheezing, or dyspnea on exertion in order to detect COPD or asthma. (CHEST, 4/00; RESPIRATORY CARE, 5/00) n

RC WEEK Focuses on RTs and COPD Screening

Respiratory therapists across the United States will celebrate National Respiratory Care Week Sept. 10-16, and this year the AARC is encouraging RTs to use this special week to promote early detection of chronic obstructive pulmonary disease through routine lung function testing, as recommended by the National Lung Health Education Program (NLHEP). (See previous article.)

"There are as many as 15 million people in the United States with undiagnosed chronic obstructive pulmonary disease," says AARC Executive Director Sam Giordano. "What's more, the majority of these people will have been robbed of 20%-40% of their lung function before they show any signs of the illness, like shortness of breath."

COPD costs Americans about $17 billion per year in medical costs, hospitalizations, and physician visits and is the fourth leading cause of death in the U.S. However, a significant portion of these costs – and the pain and suffering that go along with them – could be avoided if at -risk patients were identified early in their disease through routine lung function testing during regular physician office visits. While spirometry testing is used daily in doctor's offices across the country to help determine the severity of asthmatics' conditions, the NLHEP notes that, thus far, the test has rarely been used to detect COPD in this setting.

Louise Nett, RN, RRT, FAARC, research associate for the NLHEP, holds that respiratory therapists are the ideal medical professionals to educate the primary care physicians they work with in hospitals about the benefits of making spirometry a part of routine check-ups for their patients. "I'd like to see every respiratory therapy department in the country get interested in early detection and start working on a small scale within their hospitals with their primary care doctors to have educational days for them on spirometry and smoking cessation," she says.

This is exactly what the AARC is encouraging RTs across the country to do during the week of September 10. Appropriate events include offering spirometry screenings in malls and shopping centers, as well as in hospitals and other health care facilities. RTs can also host a variety of other events: walk-a-thons, "respiratory-health" fairs, tree-planting ceremonies, and open houses will be among the activities used to promote awareness of the respiratory therapist's vital role in the early detection of COPD and the importance of good respiratory health practices.

Dr. Thomas Petty, chairman of the NLHEP, advocates using spirometry testing in routine check-ups, especially on smokers 45 or older, who are most at risk for developing lung disease. The recently released NLHEP spirometry statement calls for all primary care practitioners to have spirometers in their offices. "The ultimate goal of the program is to make spirometry as common in the physician's office as the blood pressure cuff is today," says Petty. n

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Docs Don't Always Play by the Rules

A random national sample of physicians showed that 39% have manipulated reimbursement rules so that patients could receive care that physicians perceived as necessary.

Matthew K. Wynia, MD, MPH, from the American Medical Association's Institute for Ethics, and colleagues, surveyed 1124 practicing physicians by mail in 1998 to determine the frequency with which physicians manipulate reimbursement rules to obtain coverage for services they perceive as necessary. The survey also measured the physician attributes and personal and practice characteristics associated with these manipulations. Sixty-four percent (720) of the physicians responded to the survey.

Physicians were asked if, in the last year, they had exaggerated the severity of patients' conditions, changed patients' billing diagnoses, and/or reported signs or symptoms that patients did not have to help the patients secure coverage for needed care. Thirty-nine percent of physicians reported using at least one of those

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three tactics "sometimes" or more often in the last year.

"Unless novel strategies are developed to address this, greater utilization restrictions in the health care system are likely to increase physicians' use of such manipulative 'covert advocacy' tactics," the authors write.

In statistical models comparing these physicians with physicians who "never" or "rarely" used any of these tactics, physicians using these tactics were more likely to: 1) believe that "gaming the system" is necessary to provide high-quality care today, 2) have received requests from patients to deceive insurers, 3) to feel pressed for time during patient visits, and 4) have more than 25% of their patients covered by Medicaid. Of those reporting using these tactics, 54% reported doing so more often now than five years ago. The researchers also found that greater worry about prosecution for fraud did not affect physicians' use of these tactics.

"For the first time that we are aware of, physicians were asked to report the frequency of actually manipulating reimbursement rules in practice," the authors write. "In previous studies, researchers have used second- or even third-party hypothetical scenarios to explore these behaviors."

The researchers emphasize, however, that doctors are not necessarily being motivated by the bottom line in these decisions. "Two aspects of our findings suggest that financial self-interest is not the sole motivation for most physicians who manipulate reimbursement rules," the authors add. "First, manipulation of reimbursement rules was most common in the situation in which an individual physician could not possibly provide free or reduced-cost care (i.e., hospitalization). Physicians may reserve gaming the system for situations in which free care cannot be offered. Second, to our surprise, we found no association between manipulation of reimbursement rules and any of the financial markers we examined, such as proportion of income at risk, principal type of reimbursement (fee for service versus capitation or salary), or recent practice-related income losses." (JAMA, 4/12/00) n

AARC Members Eligible for Low-Cost Professional Liability Insurance

For over 20 years, the AARC has had a relationship with Maginnis/Seabury & Smith to bring insurance products to the members of the AARC. In fact, the only way to access their professional liability insurance is to be a member of the AARC. This allows them to offer low premiums at group rates on this particular insurance plan. You should consider professional liability insurance as part of your career protection plan.

Now Maginnis/Seabury & Smith is pleased to announce a new website (http://www.wohlers.com/plans/company.asp?co=AARC) where members of the AARC can request information on professional liability insurance or other insurance programs they offer. Please take this opportunity to review your insurance needs and send away for more information. n

Blood Pressure Numbers Escape Seniors

Nearly half of all Americans aged 50-plus do not know their own systolic and diastolic blood pressure numbers, according to a survey conducted by The National Council on the Aging (NCOA). The survey of 1500 Americans over the age of 50 also found that people in this group, who are at great risk for complications from uncontrolled blood pressure, do not understand the factors that contribute to high blood pressure or the dangers of untreated high blood pressure.

More than two out of three of those surveyed had not discussed the physical consequences of high blood pressure with a doctor or nurse in the past 12 months, and only 27% knew the importance of the systolic number as an indicator of high blood pressure. Alarmingly, one third of those affected were unaware that they had high blood pressure, and only 27% were being treated to the recommended goal of 140/90mmHg as identified by the Sixth Report of the Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure. The survey results also revealed that nearly half of the respondents incorrectly believed that stress is the main cause of high blood pressure.

As a follow-up, the NCOA will be urging its member organizations to make sure that seniors "know their blood pressure numbers" and talk to their physicians about getting their blood pressure under 140/90mmHg. (NCOA) n

Alzheimer's Disease and Folic Acid

Folic acid, also called folate, has been shown to reduce the risk of disease throughout the lifespan, preventing birth defects; warding off coronary heart disease, stroke, peripheral vascular disease, and atherosclerosis; and possibly reducing the risk of breast and colon cancer, dementia, and Down syndrome. Now researchers believe it may also help to prevent the brain degeneration that causes Alzheimer's disease.

In a study of elderly Catholic nuns, low serum folate levels in blood samples collected in 1993 were strongly associated with atrophy of the cerebral cortex in women who had a significant number of Alzheimer lesions in the brain when they died a few years later.

Says Dr. David A. Snowdon, associate professor at the University of Kentucky and director of the Nun Study, "The goal of the Nun Study is to determine the causes of Alzheimer's disease, other brain diseases, and the mental and physical disability associated with old age. Our recent findings suggest that folic acid . . . may also play an important role in maintaining the integrity of the brain in late life."

The Nun Study was completed before folic acid fortification became mandatory in the United States, and investigators say it remains to be seen whether folic acid fortification will result in a lower incidence of Alzheimer's disease. Meanwhile, however, they believe Alzheimer's disease should be included on the list of potentially diet-related chronic conditions. (ASNS/ASCN) n

Specialty Practitioner of the Year

Don't forget to make your nominations for the 2000 Adult Acute Care *Specialty Practitioner of the Year*. This honor is given to an outstanding practitioner from this section each year at the AARC's Annual Convention.

The recipient of this award will be determined by the section chair or a selection committee appointed by the chair. Each nominee must be a member of the AARC and a member of the section.

Use the following form to send in your nominations for this important award:

I would like to nominate ____________________________ for Adult Acute Care *Specialty Practitioner of the Year* because

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City State,Zip	Your Name
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Phone	Phone

Mail or FAX your nominee to the section chair at the address/number listed on page 2 of this issue.