

Guidelines Not Followed

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Only 117 patients (59%) had spirometry performed in the previous 10 years. Of those 117 patients, spirometry confirmed a diagnosis of COPD in 102 patients (87%), and did not confirm in 15 patients (13%).

Within 3 months of spirometry, the results were mentioned in 71 cases (61%), severity was noted in 43 cases (37%), and medication was changed in only 48 cases (41%).

Low spirometry use may have occurred because patients had to be referred to a pulmonary laboratory in the institution for testing, and because results may not be followed correctly when patients don't always return to the same physician at the clinic, Dr. Chavez said in an interview.

In 102 patients whose COPD stage was known from spirometry, 9 were stage 1, 36 were stage 2, 48 were stage 3, and 9 were stage 4.

Stage-appropriate therapy, based on GOLD criteria, was used in 3 stage 1 patients (33%), in 2 stage 2 patients (5.5%), in 13 stage 3 patients (27%), and in 3

stage 4 patients (33%).

Overall, 45% of patients received medication combinations not recommended by GOLD treatment criteria, and 22% received medications that were not stage-appropriate combinations according to the criteria, Dr. Chavez said.

Short-acting bronchodilators, which are appropriate for all stages of COPD, were used by the majority (93.5%) of patients. Inhaled steroids and oxygen, which are reserved for severe or very severe COPD patients, were used by 42% and 17% of such patients, respectively.

Obstacles to stage-appropriate therapy include money, low spirometry utilization, and lack of awareness of GOLD criteria, he said.

"If spirometry were readily available in the office, I think we'd be more prone to use it," Dr. Chavez said, adding "In Europe they do. There's no research on this in the United States, but my guess is they always refer, which might be a barrier." ■

Group Therapy of Benefit To Anxious COPD Patients

BY BRUCE JANCIN
Denver Bureau

SALT LAKE CITY — Anxiety in patients with chronic obstructive pulmonary disease is common, disruptive, and responds favorably to cognitive-behavioral group therapy, Dr. Sandra G. Adams reported at the annual meeting of the American College of Chest Physicians.

Other investigators have shown that clinically significant anxiety occurs in up to half of COPD patients, and that it's associated with greater disability and impairment of quality of life. Moreover, in a prospective five-country Scandinavian study involving 416 COPD patients, anxiety proved to be an independent risk factor for rehospitalization within 12 months, conferring a 76% increase in risk (Eur. Respir. J. 2005;26:414-9).

This raises the possibility—as yet not examined in a clinical trial—that treating anxiety in patients with COPD might reduce rehospitalization, noted Dr. Adams of the University of Texas, San Antonio.

Experts agree COPD is underdiagnosed. And among patients with known COPD, anxiety is also greatly underdiagnosed, she said. For example, only 1 of 22 patients with severe COPD and moderate to severe anxiety in her random-

ized trial of cognitive-behavioral therapy (CBT) had been diagnosed with anxiety.

Participants had a mean baseline forced expiratory volume in 1 second of 33% of predicted, indicative of very severe COPD. They also acknowledged having a "somewhat difficult" problem with at least one anxiety symptom on the Prime-MD screening instrument.

Patients were randomized to one 90-minute group session of CBT per week for 6 weeks, or to a general health education class with the same schedule. There were five to seven patients per group. CBT sessions covered relaxation techniques, stress and coping skills, practical goal setting, and general COPD information. The control group received information on COPD, exercise and nutrition, Social Security benefits, and advance directives.

At follow-up 6 weeks after completing the 6-week program, patients in the CBT arm showed significant improvement in quality of life, as reflected in a mean 11-point improvement on the St. George's Respiratory Questionnaire over a baseline score of 72. In contrast, scores in the control group worsened by nearly 6 points.

However, neither group showed a significant change on the Beck Anxiety or Beck Depression inventories. ■

Nonsurgical Procedures Are in the Works for Advanced Emphysema

BY BRUCE JANCIN
Denver Bureau

SALT LAKE CITY — A variety of innovative bronchoscopic procedures are being developed to achieve nonsurgical lung volume reduction as treatment for advanced emphysema.

The goal is to capitalize upon the functional and mortality benefits documented with lung volume reduction (LVR) surgery in a subset of participants in the National Institutes of Health-sponsored National Emphysema Treatment Trial—but without the associated hefty perioperative mortality, major morbidity, and expense. If the bronchoscopic innovations prove successful, they could transform the field of respiratory medicine, much as percutaneous angioplasty and stenting have revolutionized cardiology, speakers predicted at the annual meeting of the American College of Chest Physicians.

Planning is now underway for large multicenter randomized trials of several novel investigational bronchoscopic LVR procedures that have successfully passed the pilot study phase of development. Among them are insertion of one-way valves into pockets of diseased lung tissue, biologic tissue destruction with induction of scarring, and stent placement to create decompression of hyperinflated diseased lungs.

"I have this dream that you'll go into the recovery room and you'll be sweating with scrubs on and the cardiologist is going to come in and say, 'Wow, I had a tough case—I put three stents in,' and you'll say, 'Well, I had a tougher one—I put in seven valves,' or 'glued six subsegments,' or 'put in six stents.' Maybe we'll be able to induce physiologic changes and gain time for these patients," said Dr. Bartolome Celli, professor of medicine at Tufts University, Boston.

Dr. Daniel H. Sterman said that although LVR surgery didn't increase survival in the 180-patient National Emphysema Treatment Trial as a whole, it did improve survival, pulmonary functional capacity, and health status in the subset of participants with heterogenous, predominantly upper lobe emphysema and poor exercise capacity (N. Engl. J. Med. 2003;348:2059-73).

The price of surgical LVR, however, was steep: a 30-day mortality of about 5%, close to 50% major morbidity, and lengthy hospitalization. This has prompted intense research interest in developing procedures to reduce the volume of hyperinflated diseased lung without actually cutting out tissue, added Dr. Sterman, an interventional pulmonologist at the University of Pennsylvania, Philadelphia. He disclosed that he has been a consultant and a member of the scientific advisory committee for Spiration Inc.

He was lead investigator in a multicenter U.S. pilot study of Spiration Inc.'s Intrabronchial Valve (IBV), a one-way valve allowing air to escape from diseased portions of the lung, enabling the lungs to work more efficiently. Five hundred twenty IBV valves were implanted in the upper lobes of 75 emphysema patients in the nonrandomized study, which typically involved an overnight hospital stay.

Forty-six patients benefited, showing significantly improved general and disease-specific health status and reduced oxygen consumption

with up to 1 year of follow-up. Complications in this subgroup were limited to one case of bronchospasm and one flare of chronic obstructive pulmonary disease.

Follow-up CT scans at 3 and 6 months showed significant reduction in the volume of the upper lobes of the responders, compared with their lower lobes, which increased in both volume and vascularity. This suggests the clinical benefits resulted at least in part from a redirection of ventilation and perfusion to the relatively spared lower lung segment, he explained.

Responders were younger than 75 years old, had fewer lung segments treated, and didn't have any valves placed in the lingula. These findings will be incorporated into the upcoming large randomized trial.

Surgical LVR costs fueled interest in finding ways to reduce the volume of hyperinflated lung without cutting tissue.

DR. STERMAN

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left inside the individual," the physician noted. The procedure, being developed by Aeris Therapeutics Inc., is definitely safe, said Dr. Celli, who has received research funding from the company. The only associated adverse events have been the minor sort common with flexible bronchoscopy. All patients were by protocol discharged the day after the procedure, but most could have gone home the same day.

As for efficacy, early results look promising; but it will take many more patients and longer follow-up to know for sure, Dr. Celli added. The treatment concept involves identifying sick areas of lung, then instilling the biologic agent to induce atelectasis and shrink the volume so that much healthier but compressed lung tissue is allowed to expand.

A dose-response effect was apparent. The patients who have shown clinically meaningful improvements in vital capacity and exercise capacity were the ones who received the most extensive treatment: bilateral therapy targeting up to 10% of total lung volume. Future clinical trials may target 20%-30%.

The biologic procedure's safety lends itself to repeat sessions as additional areas of lung deteriorate. One appealing but as yet untested strategy: perform biologic LVR, measure lung function, then decide if the patient needs to come back in a few weeks for further LVR to optimize results.

The patient with the best response to treatment to date is swimming for exercise and still going strong 14 months after treatment. To physicians familiar with severe COPD, that's nothing short of miraculous, he said. But investigators haven't figured out why he's doing so well while some others who underwent extensive treatment didn't have major responses.

"We still have a long way to go," Dr. Celli emphasized.

Nonetheless, the future of nonsurgical interventions looks bright for patients with severe COPD, who traditionally have had few options other than the faint prospect of lung transplantation. Dr. Celli offered a final bit of advice to his fellow chest physicians: "Go learn bronchoscopy." ■

