β-Blockers Safe in Heart Failure With COPD

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SEATTLE — The long-term use of β-blockers in heart failure patients with chronic obstructive pulmonary disease and/or asthma did not increase the risk of respiratory complications, results from a large retrospective study have shown.

"Although a history of asthma and/or COPD is still considered a relative contraindication to the use of β-blockers in the management of [heart failure], our study found that long-term use did not increase the risk for respiratory complications," Jay I. Peters, M.D., said at a press briefing during the annual meeting of the American College of Chest Physicians. "We did not see any differences in outcome with the use of cardioselective vs. noncardioselective β-blockers. The proven mortality benefit of β-blocking medication in [heart failure] mandates their use whenever possible."

During the 1960s, physicians viewed β-blockers as contraindicated in patients with heart failure. "Subsequent research revealed that the use of cardioselective β-blockers upregulated the β-receptor and was useful" in patients with heart failure, said Dr. Peters of the division of pulmonary diseases and critical care medicine at the University of Texas Health Science Center at San Antonio.

In fact, results of recent studies have shown improved survival among heart failure patients on β-blockers: For every 20 patients treated with these drugs, one life is saved (Ann. Intern. Med. 2001;134:550-60 and N. Engl. J. Med. 2001;344:1711-2).

"Unfortunately, many review articles and guidelines often list asthma and COPD as relative contraindications to using β-blockers. Many physicians in the community are hesitant to use these medications if the patient has any history of obstructive lung disease," he noted.

A recent metaanalysis of data on 141 patients concluded that cardioselective β-blockers are not associated with increased respiratory symptoms or inhaler use, and that β-blockers may enhance the effect of inhaled β-agonist (Cochrane Database Syst. Rev. 2002;[4]:CD002992). But "the duration of the studies was only 3 days to 4 weeks, and only 46 patients had pulmonary function tests," Dr. Peters said.

In a study funded by the U.S. Department of Defense, he and his associates evaluated the prevalence of β-blocker use and the prevalence of respiratory events in patients with COPD and/or asthma. Their retrospective analysis of prospectively collected data included 1,067 patients with heart failure who were followed over 18 months. Investigators reviewed every nonroutine office visit, emergency department visit, and hospitalization over the 18-month period to evaluate respiratory symptoms and cardiac symptoms.

The prevalence of asthma was 5.9%, the prevalence of COPD was 11.2%, and 2.5% of patients had both COPD and asthma.

"So, overall, 19.6% of patients had obstructive lung disease and could have benefited from β-blockers," Dr. Peters said.

Only 39% of patients with asthma and obstructive lung disease were on β-blockers. About 45% of asthmatics and 35% of patients with COPD were on β-blockers. In addition, 49% of the patients were prescribed cardioselective β-blockers "that are felt to be safer in patients with obstructive lung disease."

Patients with heart failure and any respiratory diagnosis had a threefold increase in respiratory encounters, compared with patients who had a diagnosis of heart failure alone.

Overall, the use of β-blockers in patients with asthma and/or COPD did not increase the number of respiratory emergencies, and in patients with asthma and COPD, statistically lowered the rate of respiratory events. However, this group was small, and larger studies are needed to confirm this finding, ■