

## $\beta$ -Agonists in LQTS Raises Cardiac Risks

BY BRUCE JANCIN  
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CHICAGO — The use of  $\beta_2$ -agonists for bronchodilation in asthma patients with hereditary long QT syndrome doubles their risk of serious cardiac events, Princy Thottathil reported at the annual meeting of the American College of Cardiology.

That's the bad news. The good news is concomitant  $\beta$ -blocker therapy essentially neutralizes this increased risk, she said.

But while  $\beta$ -blockers are routinely recommended in patients with long QT syndrome (LQTS) to reduce sympathetic activation and decrease stimulation to the heart, they are underutilized for this purpose. Of 3,287 patients in the International LQTS Registry, only 49% were on a  $\beta$ -blocker.

**The risk was greatest during the first year after initiation of  $\beta$ -agonist therapy, when the patients were at an adjusted 3.5-fold increased risk of cardiac events.**

And in the subset of 101 registry participants on  $\beta_2$ -agonist therapy for asthma, only 66% were also on a  $\beta$ -blocker, said Ms. Thottathil, a medical student at the University of Rochester (N.Y.).

"What we're suggesting is if a patient with

LQTS has asthma and needs to be on a  $\beta_2$ -agonist, consider giving them a  $\beta$ -blocker," she said in an interview.

The problem with  $\beta_2$ -agonist therapy in patients with LQTS is that it results in costimulation of cardiac  $\beta_2$ -receptors, potentially resulting in prolonged repolarization and ventricular tachycardia, she explained.

The primary end point in her study of the International LQTS Registry population was the combination of syncope, aborted cardiac arrest, or sudden cardiac death through age 40. Patients on  $\beta$ -agonist therapy for asthma were at a twofold increased risk after adjustment for gender, history of asthma, QT interval, and other factors.

This risk was greatest during the first year after initiation of  $\beta$ -agonist therapy. During that first year, patients on a  $\beta_2$ -agonist were at an adjusted 3.5-fold increased risk of cardiac events. The risk dropped off subsequently, perhaps because of adaptation to the drug dosage, Ms. Thottathil said.

The combination of a  $\beta$ -agonist and a corticosteroid is often recommended in asthma patients, especially children. But the addition of a steroid further increased the risk of cardiac events; individuals with LQTS on this combination had a 3.7-fold increased risk of cardiac events, compared with those on neither drug. The explanation is probably that anti-inflammatory steroids can costimulate the  $\beta_2$ -receptor, she continued.

The elevated risk of the combined cardiac end point observed in LQTS patients on  $\beta$ -agonist therapy was reduced by 86% in patients on a  $\beta$ -blocker. ■

## Statins Reduce BP, Even in the Normotensive

BY MARY ANN MOON  
Contributing Writer

Statins reduced systolic and diastolic blood pressure, even in normotensive subjects and those with "prehypertension," in a secondary analysis of data collected in the University of California, San Diego, Statin Study.

Both simvastatin, the most lipophilic statin, and pravastatin, the most hydrophilic statin, were found to decrease

blood pressure "substantially, although the mean absolute magnitude of the change was modest in this largely non-hypertensive sample receiving relatively low statin dosages," Dr. Beatrice A. Golomb and her associates at the university reported based on their analysis.

The investigators used data from the large 6-month UCSD Statin Study to assess the impact of the anticholesterol drugs on blood pressure because data from many small studies have suggested

that statins improve hypertension.

However, these studies "have been correlational, uncontrolled, tested against other active drugs with uncertain impact on BP, unblinded, nonrandomized, or without assessment of statistical significance," they noted.

In contrast, the UCSD Statin Study randomly assigned 973 participants (about 68% men) to 20 mg/day simvastatin, 40 mg/day pravastatin, or placebo in a double-blind fashion and



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