**Left Ventricular Volume Reduced With Suturing**

**BY MITCHEL L. ZOLER**

**Philadelphia Bureau**

MUNICH — A novel surgical method reduces the left ventricular volume of patients with cardiomyopathy without using ventriculotomy.

The surgery realigns the papillary muscles of the left ventricle and reduces left ventricular volume by placing three sutures through the trabeculae around the bases of the anterior and posterior muscles, Diane Barker, M.B., said at the annual congress of the European Society of Cardiology.

The procedure, which involves graded placation of the papillary muscles through a small, apical incision, usually takes about 15-20 minutes, said Dr. Barker, a cardiologist at Leeds (England) General Infirmary. The suturing also reduces functional mitral regurgitation. It is generally combined with coronary bypass.

This approach was developed when surgeons in Leeds became dissatisfied with the morbidity and mortality associated with the Batista procedure, which involves resection of myocardium from the left ventricular free wall.

Unni Krishnan R. Nair, M.B., who developed the new technique, has used it to treat 30 patients in Leeds since 1998. Follow-up for the patients has ranged from 12 weeks to 28 months. One patient died within 30 days of the procedure from sepsis. One other patient developed atrial fibrillation following surgery. All of the other patients had improvements in their left ventricular function and in their clinical status, and none developed ventricular arrhythmias, Dr. Barker reported. Three additional patients died 4-24 months following surgery, but none of these deaths appeared related to surgery. The average age of the patients was 61 years, and three-quarters were men. All of the patients had ischemic cardiomyopathy.

The mean left ventricular volume of patients before the surgery was 271 mL; after surgery, the average volume was 230 mL. Before surgery, the patients had heart failure with an average New York Heart Association functional classification of 2.8; after surgery, the average functional class was 1.4.

To better assess the impact of this surgery, Dr. Barker and Dr. Nair compared the outcomes of 8 patients who underwent suturing of their papillary muscles plus bypass surgery with 12 similar patients who were treated with bypass surgery only (see box.)

Exercise duration improved by a mean of 14% from baseline among patients who underwent papillary muscle suturing, compared with a mean improvement of 18% among patients who had bypass surgery only. Peak oxygen capacity rose by a mean of 21% among patients treated with papillary muscle suturing, compared with an average rise of 9% among patients who had bypass surgery only. And cardiac reserve rose by a mean of 148% among patients treated with papillary muscle suturing, compared with a mean increase of 14% in the control patients.

The next step in development of the surgery is to test its safety and efficacy in a randomized, controlled study, Dr. Barker said.

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**Standard Digoxin Nomogram Can Lead to Deadly Overdoses in HF**

**BY MITCHEL L. ZOLER**

**Philadelphia Bureau**

MUNICH — Patients with heart failure who are treated with digoxin administered according to the standard nomogram risk getting an overdose that might kill them.

“We recommend treating patients who get digoxin with half the dose from the nomogram,” said Kirkwood P. Adams, Jr., M.D., at the annual congress of the European Society of Cardiology.

Half the standard dosage gives most patients a serum level of 0.3-0.9 ng/mL. A post hoc analysis of data collected in the landmark Digitalis Investigation Group (DIG) trial showed that patients with a serum level in this range had a 15%-20% reduced risk of death during follow-up, compared with patients who did not receive digoxin, reported Dr. Adams, a cardiologist at the University of North Carolina in Chapel Hill.

In contrast, patients who had serum levels of 1.2-1.5 ng/mL had a death rate that was 33% higher than that of matched placebo patients.

“This risk is believed to be due to the neurohormonal effects of a relatively high serum level of the drug. At lower serum levels, digoxin probably has a small inotropic effect that is safe and beneficial,” Dr. Adams told this newspaper.

In the DIG trial, conducted from 1991 to 1995, the 6,800 patients with stable heart failure were randomized to treatment with digoxin or placebo on top of a standard level of cardiac support to the biochemical and total hospital days. The reduction in hospital days also was noted with T2D plus insulin.

The findings challenge recommendations against using T2D in heart failure based on concerns about fluid retention, particularly when used in combination with insulin. No trials have assessed the impact of T2D therapy on heart failure.

“Perhaps the nonhemodynamic cardiovascular effects of T2D may have favorable clinical impact in heart failure patients,” John S. Golden, M.D., said during a poster presentation at the annual meeting of the Heart Failure Society of America.

“I can’t tell you on the basis of this study that it is something we ought to be doing as a therapeutic intervention at this point,” said Dr. Golden of Mid-Atlantic Permanente Medical Group, Fairfax, Va. But the study “tends some clinical support to the biochemi- cal mechanisms supporting not only the safety, but efficacy, of T2D in this population.”

Consequently, 97 diabetic patients were referred with ventricu- lar ejection fractions of 35% or less and New York Heart Association class II-IV. A total of 37% were treated with a T2D and 15% with a T2D plus insulin. All received ACE inhibitors or angiotensin receptor blockers, 97% got β-blockers. At 1 year, improvements in ejection fractions did not differ significantly between patients treated with T2D and those who were not. T2D therapy led to reduced all-cause hospitalizations per patient (0.19 vs. 0.71), heart failure hospitalizations per patient (0.03 vs. 0.16), and total hospital days (0.67 vs. 2.72).

Patients on T2D plus insulin had a reduction in total hospital days per patient (2.30) compared with those not on the combination therapy.

—Patrice Wendling

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**TZD Use in Heart Failure: Not That Bad After All?**

**TORONTO — A retrospective** analysis has shown no adverse effects of thiazolidinediones on diabetic heart failure patients. Thiazolidinedione (TZD) use was associated with reductions in all-cause hospitalizations, heart failure hospitalizations, and total hospital days. The reduction in hospital days also was noted with T2D plus insulin. The findings challenge recommendations against using T2D in heart failure based on concerns about fluid retention, particularly when used in combination with insulin. No trials have assessed the impact of T2D therapy on heart failure.

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