## Obesity Linked to Higher AF Recurrence, Burden

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FROM THE ANNUAL CONGRESS OF THE EUROPEAN SOCIETY OF CARDIOLOGY

STOCKHOLM – Obesity in patients with a history of atrial fibrillation was linked with a significantly increased risk for recurrent atrial fibrillation episodes and more time spent in atrial fibrillation episodes in a post hoc analysis of more than 2,500 patients in an intervention trial.

A multivariate analysis of factors linked with atrial fibrillation (AF) in these patients indicated that left atrial size mediated the obesity link, and that higher body mass index significantly correlated with larger left atrial size, Dr. Maya Guglin said at the congress. The new findings extended earlier reports that established obesity as a risk factor for newonset AF with left atrial size the mediating factor, said Dr. Guglin, a cardiologist and director of the heart failure program at the University of South Florida in Tampa.

Her study used data collected in the Atrial Fibrillation Follow-Up Investigation of Rhythm Management (AFFIRM)

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study, which in 2002 established in more than 4,000 randomized patients that rate control of AF worked as well as did a rhythm-control strategy while leading to fewer adverse effects (N. Engl. J. Med., 2002;347:1825-33). AFFIRM enrolled patients aged 65 or older who had at least one risk factor for stroke or death, and a recent history of AF with recurrence likely. The patients' average age was 70 years, and 39% were women. The new analysis focused on 2,518 AFFIRM patients with medical records that included their body mass index at entry into the study. This subgroup divided nearly equally between patients assigned to the rate control arm and those who received rhythm control.

The new analysis used the number of cardioversions patients received during follow-up as a surrogate marker for recurrent AF, and the number of times they presented with AF during follow-up medical examinations as a surrogate measure for their overall AF burden.

Obese patients, those with a baseline BMI of at least 30 kg/m<sup>2</sup>, had a statistically significant 26% higher risk for recurrent AF compared with patients with a normal BMI of  $18.5-25.0 \text{ kg/m^2}$ . When analyzed with BMI index as a continuous variable, the recurrence risk rose by about 1.5% for each one-unit rise in baseline BMI, Dr. Guglin reported.

AF burden and baseline BMI showed a similar relationship. Obese patients av-

eraged a significant 55% increased AF burden compared with normal-BMI patients. For each one-unit increase in baseline BMI, AF burden during follow-up increased by about 2%.

The multivariate analysis that identified left atrial size as the only baseline variable independently linked with higher AF recurrence and burden incorporated 14 variables, including age, diabetes, hypertension, coronary artery disease, and left ventricular ejection fraction. The finding that higher BMI links with larger left atrial size that in turn links with the risk for newonset AF first appeared in an analysis of data from the Framingham Heart Study and the Framingham Offspring Study, Dr. Guglin said (JAMA 2004;292:2471-7).

**Major Finding:** Obese patients with atrial fibrillation had a 26% increased AF recurrence rate and a 55% increased rate of AF burden compared with normal-weight patients with AF, effects mediated by left atrial size.

**Data Source:** Post hoc analysis of 2,518 patients enrolled in the AFFIRM trial. **Disclosures:** Dr. Guglin said that she had no conflicts of interest.

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