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TCT@ACC-12 | innovation in intervention

A391  
JACC March 17, 2015  
Volume 65, Issue 10S

## Arrhythmias and Clinical EP

## EXCESSIVE ATRIAL ECTOPY INCREASES THE RISK OF STROKE BEYOND ATRIAL FIBRILLATION

Poster Contributions

Poster Hall B1

Sunday, March 15, 2015, 9:45 a.m.-10:30 a.m.

Session Title: What Constitutes Anti Arrhythmic Therapy for Atrial Fibrillation?

Abstract Category: 4. Arrhythmias and Clinical EP: AF/SVT

Presentation Number: 1186-254

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**Background:** About 25-30% of ischemic strokes are of unknown source, and undetected atrial fibrillation is often thought to be the etiological factor. We examined whether excessive supraventricular activity (ESVEA) increases the risk of stroke beyond incident atrial fibrillation and estimated the absolute risk of stroke in subjects with ESVEA.

**Methods:** The study is based on up to 15-years follow up from the Copenhagen Holter Study. The population is a cohort of 678 men and women aged between 55 and 75 years, with no prior history of cardiovascular disease, stroke or atrial fibrillation.

Subjects underwent up to 48-hours ambulatory ECG monitoring, fasting blood work, and clinical examination. ESVEA was defined as  $\geq 30$  premature atrial contractions (PACs) per hour or any runs of  $\geq 20$  PACs. The primary endpoint was ischemic stroke.

**Results:** During the median follow-up of 14.4 years, ischemic stroke occurred in 73 subjects. Of these 21 had ESVEA at baseline (hazard ratio, 2.95; 95% CI, 1.77 to 4.90;  $P < 0.0001$ ). In subgroup analysis removing patients with manifest atrial fibrillation ESVEA was associated with stroke in univariate (hazard ratio, 2.91; 95% CI, 1.69-5.91;  $P < 0.0001$ ) and multivariate analysis adjusted for conventional stroke risk factors (hazard ratio, 1.93; 95% CI, 1.08 to 3.45;  $P = 0.026$ ). The absolute risk of stroke in subjects with ESVEA aged  $> 65$  years were 3.8%/year, which is comparable to having atrial fibrillation and a CHA2DS2VASc score of 3. Day-to-day analysis of ESVEA showed good stability with a mean difference of 2.8 PACs/day (95% CI, -21.7-16.5).

**Conclusion:** ESVEA increases the risk of ischemic stroke beyond manifest atrial fibrillation and the first clinical presentation can be stroke. In contrast to paroxysmal atrial fibrillation ESVEA is a clinically relatively stable state, which seems to confer the same absolute risk as atrial fibrillation.