



## **Obesity triggers AF in fertile women - ESC Press release - ESC Congress 2012**

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Atrial fibrillation and obesity are among the largest public health related challenges in the western world today. Atrial fibrillation is the commonest heart rhythm disorder and is associated with increased mortality and morbidity. Previous studies have demonstrated that obesity increases the risk of new-onset atrial fibrillation in individuals with known risk factors for developing atrial fibrillation such as advanced age or cardiovascular comorbidity.

Atrial fibrillation is rare in young, healthy individuals and precipitating factors remain controversial. A growing body of evidence suggests that genetic predisposition, inflammation, obstructive sleep apnea, excessive alcohol consumption, and excessive physical exercise may cause atrial fibrillation in these individuals. However, it is unknown whether obesity increases the risk of atrial fibrillation in young people without other risk factors. The aim of this study was to use the unique opportunity provided by the consistency of nationwide registers of childbirth and hospitalization in Denmark to examine the risk of atrial fibrillation related hospitalizations with respect to body mass index (BMI) among fertile women.

The present study was a register-based nationwide cohort study, comprising a population of approximately 271,000 seemingly healthy Danish women aged 20-50 years who had given birth during 2004-2009. They were followed for an average of 4.6 years.

The researchers adjusted the results for age, comorbidities, smoking status and pharmacotherapy received during pregnancy. They found that compared to healthy weight women with a body mass index (BMI) of 18.5-25 kg/m<sup>2</sup>, the risk of developing atrial fibrillation was 2-fold higher in obese (BMI: 30-35 kg/m<sup>2</sup>) and more than 3-fold higher in very obese (BMI > 35 kg/m<sup>2</sup>) women.

Figure 1 shows that the hazard ratio for obese women was 2.04 (CI=1.13-3.69; p=0.01) and for very obese women was 3.50 (CI=1.86-6.58; p<0.0001).

“We have found that obesity increases the risk of new-onset atrial fibrillation in seemingly healthy fertile women,” said Dr Karasoy, a research fellow at the Cardiovascular Research Center Gentofte, which is a highly specialized center in nationwide epidemiologic research in Denmark.

He added: “The burden of both obesity and atrial fibrillation has clearly intensified, reaching epidemic levels and rising to the top of public health related concerns. Strategies that comprehensively promote weight loss may also decrease the burden of atrial fibrillation.”

He continued: "Atrial fibrillation in young individuals with no known risk factors is called 'lone atrial fibrillation'. Identifying risk factors in young individuals will contribute to understanding the nature of atrial fibrillation. Dietary modifications combined with physical exercise are warranted in obese fertile women to decrease their risk of atrial fibrillation."

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#### **Notes to editors**

Please note that picture and CV from the author, abstract, picture and CV from spokesperson can be found here. <http://www.escardio.org/about/press/esc-congress-2012/press-conferences/Pages/first-second-hand-smoke-electronic-cigarettes.aspx>

About the European Society of Cardiology [www.escardio.org](http://www.escardio.org)

The European Society of Cardiology (ESC) represents more than 75,000 cardiology professionals across Europe and the Mediterranean. Its mission is to reduce the burden of cardiovascular disease in Europe.

About ESC Congress 2012

The ESC Congress is currently the world's premier conference on the science, management and prevention of cardiovascular disease. ESC Congress 2012 takes place 25-29 August at the Messe München in Munich. The scientific programme is available here.

More information is available from the ESC Press Office at [press@escardio.org](mailto:press@escardio.org).

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