

# Being female increases stroke hospitalization risk by 23 percent in atrial fibrillation patients

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A 15 year study in 1.1 million patients with atrial fibrillation has found that women are 23% more likely to be hospitalised for acute ischaemic stroke than men. The research was presented today at CARDIOSTIM - EHRA EUROPACE 2016 by Dr Ghanshyam Shantha, a cardiovascular disease fellow at the University of Iowa Hospitals and Clinics, Iowa City, Iowa, US.<sup>1</sup>

Dr Shantha said: "There is evidence from around the world that women with atrial fibrillation receive less anticoagulation for stroke prevention than they need. Just 30% of women who should receive this medication actually get it, compared to nearly 60% of men."<sup>2</sup>

He continued: "We also know that women do not get state-of-the-art ablation and other highly advanced treatments for atrial fibrillation at the same level as men. What is not known is whether these deficiencies in access to care translate into poorer outcomes."

The current study investigated whether gender had an impact on the rate of hospitalisation for ischaemic stroke in patients with atrial fibrillation. The study used information from the National Inpatient Sample, a nationally representative hospitalisation database in the US. It holds data on 8 million patients admitted to around 1000 randomly selected hospitals in 46 states during 1998 to 2012.

The study included the 1.1 million patients in the database who had been admitted to hospital with a diagnosis of atrial fibrillation. The investigators examined whether there was any gender difference in the rate of hospitalisation for acute ischaemic stroke.

Across the 15 year period, the rate of stroke hospitalisation in patients with atrial fibrillation was 2.64% in women and 2.15% in men. After adjusting for stroke risk factors including age, diabetes, hypertension, previous stroke and heart failure, the researchers found that women had a 23% higher risk of being hospitalised for stroke than men.

Treatments for atrial fibrillation have improved over the past 15 years, so the investigators looked at whether the impact of gender on stroke hospitalisation had changed over time. They found that women consistently had a higher risk of stroke hospitalisation than men, with a 27% higher risk in 1998-2002, a 23% higher risk in 2003-2007, and a 22% higher risk in 2008-2012.

Finally, the researchers assessed whether the gender differences persisted in different subcategories such as age, ethnicity, socioeconomic status, and region. Women had a higher risk of stroke compared to men regardless of whether they were less or more than 65 years of age, Caucasian or non-Caucasian, low or high socioeconomic status, and lived in one region or another.

Dr Shantha said: "However you slice, dice, and divide the data, women do poorer than men in terms of admissions for acute ischaemic stroke. This was true overall, across different time periods, and in all subcategories. There is no particular region where women with atrial fibrillation get worse care. In those with high socioeconomic status, women do worse than men, and among those with low [socioeconomic status](#) women do worse than men. Women have second-rate outcomes across the board."

"There is a debate about whether it's the biology and something naturally in women that predisposes them to stroke or whether healthcare providers are failing to give adequate care," continued Dr Shantha. "Our findings corroborate the previous evidence that women receive less treatment and support the conclusion that the gender discrepancy is due to inadequate [stroke](#) prevention care in women and not biology."

"Our results may have implications for resource allocation and policy decisions in terms of how we can prioritise women's health among [patients](#) with [atrial fibrillation](#)," added Dr Shantha. "We also need more research on why many [women](#) do not get evidence based care."

Professor Michael Giudici, senior author and Director of Arrhythmia Services at University of Iowa Hospitals and Clinics, said: "Women have a tendency to put everyone else first and say 'don't worry about me'. They need to 'worry about me' a little more. Women may have more subtle symptoms so they need to pay more attention to their blood sugar and blood pressure and not delay seeking treatment."

Provided by European Society of Cardiology

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