

Risk of stroke greater for women than men among older patients diagnosed with atrial fibrillation

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In a study that examined use of the anticoagulant medication warfarin and risk of stroke following a diagnosis of atrial fibrillation in older patients, women, especially those 75 years or older, had a higher risk of stroke than men, regardless of their risk profile and use of warfarin, suggesting that current anticoagulant therapy to prevent stroke might not be sufficient for older women, according to a study in the May 9 issue of *JAMA*.

"[Atrial fibrillation](#) (AF) is the most common cardiac arrhythmia, accounting for approximately one-third of hospitalizations for [cardiac rhythm](#) disturbances. It has been estimated that 2.2 million people in the United States and 4.5 million in the European Union have paroxysmal or persistent AF. Patients with AF have a 5-fold increase in the risk of stroke compared with the general population; therefore, antithrombotic agents are prescribed to reduce this risk. Sex-based differences related to AF have been identified, the most concerning being that women with AF have an increased risk for [cardiovascular events](#), including stroke," according to background information in the article. It has been suggested that underutilization of oral anticoagulation treatment among women has been a contributing factor to this increased risk.

Meytal Avgil Tsadok, Ph.D., of the McGill University Health Center, Montreal, and colleagues compared usage patterns of warfarin and subsequent [stroke incidence](#) between men and women 65 years or older

with AF. The study included patients admitted to the hospital with recently diagnosed AF in the [province of Quebec](#), Canada, from 1998-2007, using administrative data with linkage between [hospital discharge](#), physicians, and prescription drug claims databases.

The cohort comprised 39,398 men (47.2 percent) and 44,115 women (52.8 percent). At admission, women were older (74.2 percent of women were older than 75 years, compared with 61.4 percent of men) and had a higher CHADS2 ([congestive heart failure](#), hypertension, age 75 years or older, diabetes mellitus, prior stroke or transient ischemic attack) score than men. Warfarin prescription rates were slightly higher among women compared with men (60.6 percent in women vs. 58.2 percent in men); women tended to have more prescriptions filled for warfarin within 30 days postdischarge, compared with men. The proportions of warfarin prescriptions filled were slightly increased to 68 percent in women as well as men when prescription rates were assessed within 1 year after discharge. In general, adherence to anticoagulation therapy was relatively high and similar in both sexes.

The researchers found that crude stroke rates were significantly higher in women compared with men (5.8 percent vs. 4.3 percent). The difference between sexes was mainly driven by the rates in the older (75 years and older) patients. "Furthermore, older women had significantly higher rates of stroke than older men, regardless of warfarin use, and women had higher rates of stroke compared with men, regardless of adherence level," the authors write. Analysis indicated that women had a 14 percent higher risk of stroke than men, after adjusting for various factors.

The authors note that it is not yet known why women with AF are more susceptible to stroke. "The increased risk may be attributable to physiology (such as uncontrolled hypertension), vascular biology, genetic factors, hormonal or thromboembolic factors, or psychosocial factors that differ between men and women. We were not able to identify these

factors with our database."

"Although epidemiologic studies have investigated sex differences in stroke occurrence, little is known about warfarin effectiveness between men and women in the real-world clinical setting. Our results suggest that elderly women with AF may need to be targeted for more effective stroke prevention therapy. Clinicians should be aware of the elevated stroke risk in older women with AF, and new strategies should be applied to effectively prevent stroke equally in men and women."

More information: *JAMA*. 2012;307[18]:1952-1958.

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