



Stroke in Women: Time to Acknowledge Sex Difference

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Received: November 06, 2022

Published: December 09, 2022

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Stroke incidence, prevalence, and mortality have historically been reported to be higher in males than in women. But over time, this difference appears to be closing [1]. Recent evidence from high-income nations suggests that the risk of stroke increases with age and that elderly women over 75 may be more likely to experience a stroke than males. In various Southeast Asian nations, women under the age of 40 also experienced a rise in the incidence of ischemic stroke over time [2]. Additionally, it has been noted that females are more likely to die from stroke in the Middle East and North Africa than males are. It is critical to have a better understanding of stroke in women given the evolving epidemiology [3].

There are several sex variations that require special attention when analyzing traditional risk factors for stroke. Overall, hypertension is more common in males than in women, although it is more common and has a stronger link with ischemic stroke in older women [4]. Women are more likely than men to develop diabetes, and both atrial fibrillation and migraines are more common and strongly linked to ischemic stroke in women. In addition, women are subject to under-recognized sex-specific risk factors. According to research, women who are pregnant or recently gave birth have a three times higher risk of stroke than other young adults [5]. This is because of a variety of changes that are connected to these conditions. Pre-eclampsia is associated with a three-fold increased risk of having a stroke in later life, according to a recent study on the Framingham cohort. Hypertensive disorders of pregnancy also increase risk before and after pregnancy [6].

In addition to pregnancy, other hormonal changes raise a woman's risk of stroke. Both an early menopause and a shorter reproductive life have been linked to an elevated risk of stroke in women. Similar to exogenous estrogen, research have found

that using hormone replacement treatment or oral contraceptives increases the risk of stroke. Women also have higher variation in stroke presentations. Women typically present with less common symptoms including weariness, lightheadedness, changed mental status, etc., while men typically come with the usual focal neurological abnormalities [7]. Additionally, they frequently exhibit symptoms that mimic a stroke. These and other factors help to explain why women experience longer delays in receiving appropriate stroke care and worse results overall than men [8].

Data on stroke in women from low- and middle-income countries is quite scarce. It makes sense to assume that the risk and consequences for women in these locations would be further compounded by the socioeconomic determinants of health [9]. Women are more likely to experience stroke because of inadequate nutrition, poor pregnancy management and outcomes, multiparity, and limited access to healthcare for both acute and secondary stroke prevention. Future studies should concentrate on risk variables that are specific to women in these nations. Additionally, doctors should be made aware of the need to screen women for potential risk factors early and treat them promptly [10].

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