

Stroke as an Antecedent Risk Factor for Depression among Post-Menopausal Women

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Background:

As many as one out of every three individuals develop depression after stroke. Numerous studies have also shown a link between depression and increased rates of mortality after stroke. Additionally, the risk factors and characteristics of stroke are different between men and women. However, the association between stroke and depression has not been investigated in postmenopausal women in a nationally representative sample.

Methods:

The association between currently active depression [score ≥ 10 on a Patient Health Questionnaire (PHQ)-9 scale] and self-reported history of stroke were assessed among participants from the 2005-2010 National Health and Nutrition Examination Survey (NHANES). All post-menopausal women from the nationally representative NHANES study were included in the analysis. Multivariable complex samples logistic regression was used to calculate multivariate-adjusted odds ratios (ORs) of depression.

Results:

Out of the 3,636 (representative sample=44,110,822) post-menopausal women, the mean age was 62.6 ± 0.33 . The ethnic distribution was 77.3% non-Hispanic Whites, 10.9% non-Hispanic Blacks, 7.5% Hispanics, and 4.3% other nationalities. In age-adjusted analysis, individuals with a history of stroke had 2.5-fold higher odds of active depression than those without a history of stroke (OR 2.57, 95% CI 1.57-4.19, $p < .001$). Controlling for vascular risk factors (diabetes, hypertension, C-reactive protein, and BMI) of depression and socio-demographic risk factors (age, ethnicity, and income level) attenuated the effect (OR 2.16, 95% CI 1.17-3.99, $p < .05$).

Conclusions:

A significant association between previous stroke and current depression was found in this population, independent of vascular disease risk measures among post-menopausal women. These findings highlight the possible importance of screening for and treating depression among stroke survivors. Longitudinal studies need to be conducted assessing the mental health impact of stroke.

Key messages:

- Occurrence of stroke may lead to an increased likelihood of depression, especially among post-menopausal women.
- Due to the global COVID-19 pandemic, surveillance efforts should include mental health complication including those related to stroke.