

How does pregnancy affect risk of stroke in older, younger women?

24 October 2016

Younger pregnant women, including the postpartum period up to six weeks after delivery, appeared to be at increased risk of stroke compared with their nonpregnant counterparts, and that increased stroke risk was not associated with older pregnant women, according to a new article published online by *JAMA Neurology*.

Eliza C. Miller, M.D., of Columbia University, New York, and coauthors used data on all [stroke](#) admissions in the state of New York from 2003 to 2012 to determine age-specific incidence risk ratios for pregnancy-associated stroke (PAS) compared with nonpregnancy-associated stroke (NPAS).

There were 19,146 women hospitalized with stroke during the study period and 797 (4.2 percent) of the women were pregnant or postpartum.

The authors report the incidence of PAS in women 12 to 24 years old was 14 events per 100,000 pregnant/postpartum women compared with a NPAS incidence of 6.4 per 100,000 nonpregnant women. In women 25 to 34, the PAS incidence was 21.2 per 100,000 pregnant women and NPAS incidence was 13.5 per 100,000 nonpregnant women.

In older women 35 to 44, PAS incidence was 33 per 100,000 pregnant women and NPAS incidence was 31 per 100,000 nonpregnant women. In women 45 to 55, PAS incidence was 46.9 per 100,000 pregnant women compared with NPAS incidence of 73.7 per 100,000 nonpregnant women.

Although older pregnant women had higher rates of stroke in pregnancy than younger [pregnant women](#), their risk of stroke was similar to women of their own age who were not pregnant. But in women under 35, pregnancy increased the risk of stroke, more than doubling it in the youngest group, the authors report.

PAS accounted for 15 percent of strokes in women 12 to 24; 20 percent of strokes in women 25 to 34; 5 percent of strokes in women 35 to 44; and 0.05 percent of strokes in women 45 to 55, according to the results.

Women with PAS were less likely than women with NPAS to have vascular risk factors, diabetes and active smoking. Death was also lower among women with PAS compared with NPAS. The authors note different underlying stroke mechanisms may factor into why younger women had higher stroke risk during pregnancy.

Study limitations include billing data that lack specificity, especially in regard to PAS.

"In our sample of all women aged 12 to 55 years hospitalized with stroke in New York State from 2003 to 2012, younger pregnant and postpartum women - but not older women - were at increased risk of stroke compared with their nonpregnant contemporaries. These results have potential implications for research aimed at better characterizing and preventing PAS and clinically in terms of counseling patients. Although [older women](#) have an increased risk of many pregnancy complications, a higher risk of stroke may not be one of them. Our results should be interpreted with caution and regarded primarily as hypothesis generating; more research is needed to investigate why younger [women](#) may have an increased risk of PAS," the study concludes.

More information: *JAMA Neurol.* Published online October 24, 2016. [DOI: 10.1001/jamaneurol.2016.3774](#)

Provided by The JAMA Network Journals

APA citation: How does pregnancy affect risk of stroke in older, younger women? (2016, October 24) retrieved 8 November 2022 from <https://medicalxpress.com/news/2016-10-pregnancy-affect-older-younger-women.html>

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