Maternal Morbidity Outcomes in Idiopathic Moyamoya Syndrome in New York State

Hajere J. Gatollari MPH  
Rowan University

Amelia K. Boehme Ph.D.

E. Sander Connolly M.D.

Alexander M. Friedman M.D.

Mitchell S.V. Elkind M.D.

See next page for additional authors

Follow this and additional works at: https://rdw.rowan.edu/stratford_research_day

Part of the Cardiovascular Diseases Commons, Neurology Commons, Obstetrics and Gynecology Commons, and the Women's Health Commons

Let us know how access to this document benefits you - share your thoughts on our feedback form.

https://rdw.rowan.edu/stratford_research_day/2019/may2/56

This Poster is brought to you for free and open access by the Conferences, Events, and Symposia at Rowan Digital Works. It has been accepted for inclusion in Stratford Campus Research Day by an authorized administrator of Rowan Digital Works. For more information, please contact brush@rowan.edu.
Author(s)
Hajere J. Gatollari MPH, Amelia K. Boehme Ph.D., E. Sander Connolly M.D., Alexander M. Friedman M.D., Mitchell S.V. Elkind M.D., Joshua Z. Willey M.D., and Eliza C. Miller M.D.
Pregnancy is associated with an increased risk of stroke in young women. Idiopathic moyamoya syndrome (IMMS) is a rare condition characterized by progressive narrowing of large cerebral arteries resulting in flimsy collaterals prone to rupture or thrombosis. Data are limited on pregnancy outcomes in women with IMMS. We hypothesized that IMMS would be associated with increased pregnancy morbidity, including stroke.

METHODS

Using the New York State Department of Health Statewide Planning and Research Cooperative System data from 2000-2014 and the International Classification for Diseases Ninth Edition (ICD-9), we identified all women aged 18 and older with diagnoses of IMMS (ICD-9 437.5) who had hospitalizations for delivery at any time either prior, concomitant or subsequent to IMMS diagnosis. We excluded patients with Down syndrome (ICD-9 758.0), neurofibromatosis type 1 (ICD-9 237.71) and sickle cell disease (ICD-9 282.6) at time of IMMS diagnosis. We then aggregated all pregnancies for these identified patients occurring between January 1, 1994 to December 31, 2014. Pregnancies were considered exposed if IMMS diagnosis occurred prior to or within 1 year of delivery. Intermediate unexposed pregnancies were those within 2-5 years prior IMMS diagnosis. Unexposed pregnancies occurred 6 or more years prior IMMS diagnosis. Pregnancy morbidity was defined as admission within 1 year of delivery for any of the Center for Disease Control and Prevention’s severe maternal morbidity indicators, including stroke. We compared the morbidity of IMMS-exposed pregnancies to intermediate unexposed and unexposed pregnancies. Generalized estimating equations were used to calculate odds ratio (OR) and 95% confidence intervals (95%CI) as well as adjust for women with multiple pregnancies occurring in both exposed and unexposed periods.

RESULTS

We identified 134 patients with IMMS. There were 23 (17.1%) women with IMMS who had both exposed and unexposed pregnancies. Severe maternal morbidity was highest for exposed pregnancies compared to intermediate unexposed and unexposed (34.9% vs. 27.4% vs 17.7%; p=0.0003). After adjusting for age and multiple pregnancies, there were no significant odds of severe maternal morbidity or stroke in exposed pregnancies compared to unexposed pregnancies (OR: 2.3, 95% CI: 0.8-6.9).

CONCLUSION

We identified 134 patients with 264 pregnancies in total. A majority of pregnancies were unexposed (45.1%, n=119) compared to exposed (31.4%, n=83) and intermediate unexposed (23.4%, n=62). There were 23 (17.1%) women that had both exposed and unexposed pregnancies. Severe maternal morbidity was highest for exposed pregnancies compared to intermediate unexposed and unexposed (34.9% vs. 27.4% vs 17.7%; p=0.0003). After adjusting for age and multiple pregnancies, there were no significant odds of severe maternal morbidity or stroke in exposed pregnancies compared to unexposed pregnancies (OR: 2.3, 95% CI: 0.8-6.9).

Maternal morbidity outcomes in idiopathic moyamoya syndrome in New York State

Hajere J. Gatollari MPH, Amelia K. Boehme PhD MSPH, E. Sander Connolly MD, Alexander M. Friedman MD MPH, Mitchell S. V. Elkind MD MS MPhil, Joshua Z. Willey MD MS, Eliza C. Miller MD