CEREBROVASCULAR DISEASE

Migraine in pregnancy

Migraine during pregnancy is associated with an increased risk of stroke, according to Cheryl Bushnell and colleagues at Wake Forest University, USA. In the largest population-based study conducted to date on the prevalence of migraine during pregnancy, the researchers showed that women who have migraine attacks during pregnancy are 15 times more likely to have a stroke than pregnant women who do not experience migraine.

In their case-control study, Bushnell *et al.* analyzed pregnancy-related hospital discharge codes in the US for the period 2000–2003. The data were derived from the nationwide inpatient sample from the Healthcare Cost and Utilization Project of the Agency for Healthcare Research and Quality. The researchers identified 18,345,538 pregnancy-related discharge codes, of which 33,956 were associated with a diagnosis of migraine, equating to 185 migraine codes per 100,000 pregnancies. “The prevalence of migraine in this cohort was ... quite low for this age group, and represents the subset of

women with the most severe migraines during pregnancy,” says Bushnell. The low prevalence of migraine in this patient sample was consistent with previous observations that migraines tend to improve during pregnancy. “If a woman had a history of migraines and was admitted to hospital during pregnancy but her migraines were not active, she probably was not included in the cases,” Bushnell points out.

The research team went on to examine the association between migraine codes and various vascular diagnoses and risk factors. “The most significant findings were that stroke, heart disease, vascular risk factors [hypertension, diabetes and smoking], and pre-eclampsia/eclampsia were all associated with migraine codes in the multiple regression model,” says Bushnell. The strongest relationship was between migraine codes and stroke, with the odds ratio rising to over 30 in the case of ischemic stroke.

The overall risk of stroke during pregnancy is low, but migraine could

potentially alert clinicians to underlying vascular disease. “We have an opportunity to understand severe migraines during pregnancy, provide counselling and risk factor management ... and closely monitor blood pressure,” says Bushnell. “One of the primary recommendations of this research is to ensure good prenatal care for women with a history of migraines”.

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Original article Bushnell, C. D., Jamison, M. & James, A. H. Migraines during pregnancy linked to stroke and vascular diseases: US population based case-control study. *BMJ* 338, b664 (2009).