

Seizures during pregnancy associated with risk of pre-term and small babies

August 10 2009

Women with epilepsy who have seizures during pregnancy appear more likely to give birth to pre-term, small or low-birth-weight babies than women without epilepsy, according to a report in the August issue of *Archives of Neurology*.

An estimated 0.2 percent to 0.7 percent of [pregnant women](#) have [epilepsy](#), the most common major neurologic complication in [pregnancy](#), according to background information in the article. "While approximately 40 percent of the 18 million women with epilepsy in the world are of childbearing age, managing maternal epilepsy and monitoring the health of the developing fetus remain some of the most perplexing and engaging issues in the fields of neurology and obstetrics," the authors write.

Yi-Hua Chen, Ph.D., of Tai Pei Medical University, Taiwan, and colleagues used data from the Taiwan National Health Insurance Research Data set and analyzed records from 1,016 women with epilepsy who gave birth between 2001 and 2003. Of these, 503 had seizures during pregnancy and 513 did not. A control group of 8,128 women who were the same age and gave birth during the same years but did not have epilepsy or any other chronic disease were selected for comparison.

Compared to women without epilepsy, women who had seizures during pregnancy had a 1.36-fold greater risk of having a low-birth-weight baby (weighing less than 2,500 grams), a 1.63-fold increased risk of giving

birth pre-term (before 37 weeks) and a 1.37-fold increased risk of having a baby who was small for gestational age (having a birth weight below the 10th percentile for age). In addition, when compared with women who had epilepsy but did not have seizures, the odds of women who had seizures during pregnancy having a baby who was small for gestational age were 1.34 times greater.

Some previous studies had reported a link between adverse pregnancy outcomes and mothers' epilepsy, but others found no association, the authors note. "Our study further illuminates these conflicting data to suggest that it is the seizures themselves that seem to contribute greatly to the increased risk of infants being delivered preterm, of low birth weight and small for gestational age. For women who remained seizure-free throughout pregnancy, null or mild risk was identified compared with unaffected women."

Several mechanisms might explain the association between seizures and adverse pregnancy outcomes. Trauma caused by a woman's seizures could rupture fetal membranes, increasing risk of infection and early delivery. Tension and acute injury may result from contractions in the uterus that occur during seizures. However, additional research is needed to understand how seizures interfere with fetal development.

"Neonates born pre-term, of low [birth weight](#) and small for [gestational age](#) may be predisposed to diseases during infancy and later life, highlighting the significance of proper intervention strategies for prevention," the authors write. These could include helping [women](#) control seizures for a period of time before pregnancy, assisting them in sleeping better, providing education about the risks of seizures while pregnant and teaching improved strategies for coping with stress.

[More information:](#) Arch Neurol. 2009;66[8]:979-984.

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