

US-born Latinas at great risk of having babies with retinoblastoma

August 6 2012

In a large epidemiologic study, researchers at UCLA's Jonsson Cancer Center found that the children of U.S.-born Latina women are at higher risk of having retinoblastoma, a malignant tumor of the retina which typically occurs in children under six.

The study, which focused on [babies](#) born in California, also found that [offspring](#) of older fathers were at greater risk for retinoblastoma, as were [children](#) born to women with sexually transmitted diseases and those born in [multiple births](#), which may indicate an increased risk from in vitro fertilization. Those findings confirmed the results of several smaller studies.

The research team used data from the California Cancer Registry and examined all retinoblastoma cases reported from 1988 to 2007, said Julia Heck, the study's first author and an assistant researcher in the UCLA Fielding School of Public Health. Using California data allowed the researchers to cull information from a large and diverse population that included many Latinas.

The study appears in the early online edition of the journal *Cancer Causes & Control*.

"One of the most interesting things we found in this study that hasn't been reported is the differences among Latina mothers and the risk being lower among mothers born in Mexico," Heck said. "We believe this is because women born in Mexico who come to the United States

and have children have very healthy behaviors in the perinatal period, immediately before and after giving birth."

Study senior author Dr. Beate Ritz, a Jonsson Cancer Center researcher and professor and chair of epidemiology and professor of environmental health sciences in the Fielding School, said Latinas born in the U.S. are less likely to exhibit the healthy pregnancy behaviors found in foreign-born Latinas. For example, they have poorer diets and are more likely to smoke and drink during pregnancy, which could contribute to the risks of retinoblastoma.

"Compared to U.S.-born Latinas, immigrant women born in rural Mexico often have even less education and lower socioeconomic status, but they retain healthier diets and perinatal habits, which may be correlated to lower risk of disease in their children," Ritz said.

The team chose to study retinoblastoma because its causes remain poorly understood. They sought to examine associations between perinatal factors and cancer risk in California children. They identified 609 retinoblastoma cases, 420 that occurred in one eye (unilateral) and 187 that occurred in both eyes (bilateral). They randomly selected more than 200,000 control children without [cancer](#) from the California birth rolls. The source of most of the risk factor data in this study was information from birth certificates, Ritz said.

Retinoblastoma is the result of the loss or mutation of both alleles of the RB1 tumor suppressor gene. About 40 percent of cases are considered hereditary, and most of these present as bilateral disease.

"In conclusion, we observed risk of [retinoblastoma](#) to be related to several risk factors," the study states. "Bilateral disease risk was higher among children of older fathers, and among children of multiple birth pregnancies. We observed a higher risk of unilateral disease among

children of U.S.-born Latina women. Further research should be done to confirm this finding and to examine the unique risks experienced in this population."

Provided by University of California, Los Angeles

Citation: US-born Latinas at great risk of having babies with retinoblastoma (2012, August 6)
retrieved 24 April 2024 from
<https://medicalxpress.com/news/2012-08-us-born-latinas-great-babies-retinoblastoma.html>

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