

Increased rate of hemangiomas linked to rise in number of low birth weight infants in US

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Low birth weight is the most significant factor for the development of infantile hemangiomas, a common birthmark, according to a new study by researchers at The Medical College of Wisconsin and Children's Research Institute.

The study, led by Beth Drolet, M.D., professor of dermatology and pediatrics at the Medical College and medical director of pediatric dermatology and birthmarks and vascular anomalies clinic at Children's Hospital of Wisconsin, is published in the November 2008 issue of *The Journal of Pediatrics*.

"Hemangiomas are benign tumors composed of blood vessels. Our institution has seen a dramatic increase in the number of infants presenting for care with hemangiomas. We believe the results of this study provide an explanation for this emerging pediatric health issue," says Dr. Drolet.

While factors such as being female, Caucasian and premature birth have been previously identified as risk factors for hemangiomas, Dr. Drolet's study found that low birth weight was the most statistically significant risk factor.

"For every 1.1 pound decrease in birth weight, the risk of hemangioma increased by nine-fold," says Dr. Drolet.

Recently, there has been an increase in the U.S. of infants born under 5.5

pounds. In 2005, 8.2 percent of infants born in the U. S. weighed less than 5.5 pounds. This is the highest percentage recorded since 1968 and is higher than the rate in most industrialized countries.

Additionally, a dramatic increase in low birth weight has been found in white, non-Hispanic infants. Low birth weight has increased 38 percent since 1990 in this group.

"This study reaffirms several known risk factors for infantile hemangiomas, specifically female gender, white, non-Hispanic race/ethnicity, and prematurity," says Dr. Drolet. "But the link to low birth weight may explain why physicians believe more infants are developing hemangiomas. Based on low birth weight statistics, we estimate that the incidence of infantile hemangiomas has increased by 40 percent in the last 20 years."

The researchers compared 420 children who had been diagnosed with infantile hemangiomas at Children's Hospital of Wisconsin and the University of California – San Francisco Medical Center (UCSF) with 353 children less than two years old who had been diagnosed with skin anomalies other than infantile hemangioma.

Dr. Drolet and co investigator Dr. Ilona Frieden, professor of dermatology and pediatrics at UCSF, formed a 10-member research consortium to better study ways to prevent and treat infantile hemangiomas.

Earlier studies by the research consortium identified other risk factors for developing hemangiomas, including increased maternal age, maternal history of infertility, and assisted reproductive technologies. Children born to women who had experienced a miscarriage are also more likely to develop hemangiomas. Additionally, 33 percent of infants with hemangiomas had the disorder in their family histories.

While hemangiomas are amongst the most common birthmarks, their cause is not known. Infantile hemangiomas are not visible at birth, but become evident within the first few weeks of life. Because of this, they are less likely to be recorded in typical birth defect registries.

Hemangiomas may result in permanent scarring or other medical issues that require treatment.

"The finding that a significantly higher percentage of children with infantile hemangiomas had a positive family history suggests at least some genetic predisposition," says Dr. Drolet.

There are currently no FDA-approved medical therapies for the treatment of infantile hemangiomas. Most treatments are limited, due to increasing the potential risk of scarring.

"We urgently need further research to evaluate existing medications so that more evidence-based approaches to management can be established," says Dr. Drolet. "Our study also underscores the need for continuing education of providers caring for children in distinguishing benign hemangiomas from those with the greatest potential for complications and need for treatment."

Source: Medical College of Wisconsin

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