ABSTRACT

The Association between Congenital Cataract Incidence and Average Ambient Temperature in Florida by County from 2008 to 2018

Maternal heat exposure and high environmental temperatures during gestational periods have been known to cause an assortment of congenital complications. Some of these health-related adversities include hypospadias, spina bifida, cleft palate, and congenital cataracts, also known as infantile cataracts. While genetic mutation remains the most common etiology for congenital cataracts, other potential risk factors include metabolic disorder, prenatal infection, trauma, and environmental influence such as atmospheric torridity. In this analysis, we investigated the correlation between summer heat in Florida on expectant mothers and congenital cataract formation in newborns. Using a polynomial regression model and available congenital malformation data from the Florida Department of Health, we analyzed the relationship between infantile cataracts and average ambient degrees in Fahrenheit. Our model revealed a significant correlation between temperature and congenital cataracts. Because congenital cataracts are one of the leading causes of visual loss in children worldwide, it is paramount to educate pregnant patients on risks and precautions in order to reduce blindness among infants.