H1N1 more risky than seasonal flu in children with sickle cell disease

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Infection with the H1N1 virus, or swine flu, causes more life-threatening complications than seasonal flu in children with sickle cell disease, according to research from Johns Hopkins Children's Center. The findings, to be presented on Dec. 7 at the annual meeting of the American Society of Hematology, warn parents and caregivers that such children are more likely to need emergency treatment and stays in an intensive-care unit.

The researchers analyzed the records of 118 children with sickle cell disease treated for any kind of flu at Hopkins Children's between September of 1993 and November of 2009. Of them, 28 were infected with the H1N1 virus, a new strain that emerged for the first time in April of 2009.

While both the seasonal flu and the H1N1 virus caused similar general symptoms like fever, cough and a runny nose in most of the children, sickle cell patients infected with H1N1 were three times more likely to develop acute chest syndrome, a leading cause of death among these patients, marked by inflammation of the lungs, reduced oxygen capacity and shortness of breath. H1N1-infected children were five times more likely to end up in the intensive-care unit, and were overall more likely to end up on a ventilator and more likely to need a blood transfusion than those with seasonal flu.

Another Hopkins Children's study, released earlier this year, found that children with sickle cell disease are hospitalized with seasonal flu nearly

80 times more often than other children.

The researchers say their findings point to the need to include children with sickle cell disease in the list of those who must be immunized against all flu strains, which already includes children with asthma, diabetes, heart disease and other chronic conditions.

"Children with sickle cell disease are hospitalized about once a year for pain crises and other complications, so we should do everything we can to prevent hospitalization from the flu by using safe and effective vaccines," says lead investigator John J. Strouse, M.D. Ph.D., a pediatric hematologist at Hopkins Children's.

Named for the unusually sickle-shaped red blood cells caused by a genetic abnormality, sickle cell anemia affects nearly 100,000 Americans. The cells' abnormal structure reduces their oxygen delivery to vital organs and causes them to get stuck in the blood vessels, leading to severe pain and so-called "sickling crises," which require hospitalization.

The CDC recommends that all children over 6 months of age get seasonal and H1N1 flu shots, except those who are allergic to eggs or have had a severe reaction to a flu vaccine in the past.

Source: Johns Hopkins Medical Institutions