

## **INCREASED APPEARANCE OF ASTHMA AND ECZEMA IN HIV-INFECTED CHILDREN AND ADOLESCENTS IN THE PEDIATRIC HIV/AIDS COHORT STUDY (PHACS)**

George K. Siberry, Erin Leister, Denise Jacobson, Samuel B. Foster, George Seage III, Stephen E. Lipshultz, Mary E. Paul, Murli Perswani, Andrew Colin, Gwendolyn Scott, William T. Shearer, MD

**Study Description:** Asthma is more common in children with HIV infection. The reason is not clear. But asthma is caused by the body's own immune system. HIV treatment helps the immune system get strong again. So there may be more asthma as the immune system is getting stronger. In addition, eczema and asthma occur together in children without HIV infection. But we don't know if eczema and asthma also occur together in children with HIV infection.

**Study Population:** This study used information from the medical records of all AMP children. We said children had asthma if an asthma diagnosis or medication was in their records. We said children had eczema if an eczema diagnosis was in the record. The analysis looked at the risk of getting asthma with age. The types of asthma medication used by the children were also recorded.

**Results:** Asthma was more common in children with HIV infection. Asthma medications included bronchodilators (albuterol), inhaled steroids (fluticasone), and others (montelukast). 37% of HIV-infected children had asthma by age 15. Only 29% of children without HIV infection had asthma by 15 years old. Children with eczema also had more asthma. That was true for children with and without HIV infection.

**Conclusions:** HIV-infected children and adolescents on HAART seem to get more asthma and eczema. These children may overreact to allergens because their immune systems are stronger but still not normal. This study also points out the importance of choosing asthma medications that are safe with HIV medications. For example, patients who take HIV drugs like Kaletra should not take inhaled fluticasone. This combination can cause the adrenal gland to not function well. Other inhaled steroids or other controller medications can be safely used instead.

**Support:** This study was supported by NICHD with co-funding from NHLBI, NIAID, NIDA, NIMH, and NIDCD.