7. Increased Risk of Allergic Conditions in Children Born to Women with SLE

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Limited evidence (i.e. a handful of small observational studies) suggests a potentially increased risk of allergic conditions in offspring born to women with SLE. In a large population-based study, we aimed to determine if children born to SLE mothers have an increased risk of allergic conditions compared to children born to mothers without SLE.

The "Offspring of SLE mothers Registry (OSLER)" includes all women who had ≥1 hospitalization for delivery after SLE diagnosis, identified through Quebec's universal healthcare databases (1989-2009). OSLER also includes a randomly selected control group of women, matched at least 4: 1 for age and year of delivery, who did not have a diagnosis of SLE prior to or at the time of delivery. We identified children born live to SLE mothers and their matched controls, and ascertained allergic conditions (including asthma, allergic rhinitis, eczema, cutaneous allergy, urticaria, angioedema, and anaphylaxis) based on ≥1 hospitalization or ≥1 physician visit with a relevant diagnostic code. We performed multivariate analyses to adjust for maternal age, education, race/ethnicity, and obstetrical complications, as well as calendar year of birth and sex of the child. Moreover, in a subsample analysis of children with maternal public drug coverage throughout pregnancy, we further adjusted for maternal use of antimalarials, corticosteroids, and immunosuppressive drugs.

509 women with SLE had 719 children, while 5824 matched controls had 8493 children. Mean follow-up was 9.1 (SD 5.8) years. As opposed to controls, children born to mothers with SLE experienced slightly more allergic conditions [66.1% (95% CI 62.5, 69.5) versus 59.3% (95% CI 58.3, 60.4)]. In SLE offspring, the most frequently observed allergic conditions were eczema (43.8%) and asthma (28.5%), while anaphylaxis was the least frequent (0.8%). In multivariate analysis (n=9212), children born to SLE mothers had an increased risk of allergic conditions versus control children (OR 1.36, 95% CI 1.14,1.61). In the subsample analysis further controlling for relevant maternal medications (n=1925), though a trend remained for increased risk of allergic conditions for offspring of SLE mothers versus controls, due to reduced sample size the 95% CI was wider and included the null value (OR 1.23; 95% CI 0.79, 1.91).

Compared to children from the general population, children born to women with SLE may have an increased risk of allergic conditions. Genetics, shared environmental exposures, as well as in utero exposure to maternal autoantibodies and cytokines might be at play.