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IFNGAMMA AND SOLUBLE ICAM-1 CONCENTRATIONS ARE HIGH EIGHT YEARS AFTER AN EARLY RESPIRATORY SYNCYTIAL VIRUS INFECTION

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Background: Respiratory syncytial virus infection may interfere with the development of recurrent wheezing and atopy, but the mechanisms are unclear.

Objective: The purpose of the study was to evaluate serum concentrations of soluble ICAM-1, CD14, IgE, IL-5 and IFN γ and one of the CD14 polymorphisms in children 6-10 years after hospitalization for RSV infection in relation to subsequent asthma and atopy.

Methods: Fifty-one subjects admitted to hospital for RSV infection during the first year of life and controls matched for birth date and sex attended clinical studies including lung function, skin-prick and blood tests.

Results: RSV subjects had significantly higher serum concentration of IFN γ and sICAM-1 than the controls (for IFN γ 142.6 pg/ml (SD 307.2) vs. 85.9 pg/ml (393.5), difference 56.7 pg/ml, 95% CI -82.0 to 195.4, P=0.05; for sICAM-1 170.0 ng/ml (SD 63) vs. 148.0 ng/ml (SD 57), difference 22.3 ng/ml, 95% CI -1.4 to 46.1, P=0.04). The RSV subjects with asthma had a significantly higher concentration of IFN γ than the controls with asthma. The difference in wheezing during the previous 12 months was significant for both IFN γ and sICAM-1.

Conclusion: Children hospitalized for RSV infection in infancy differ in IFN γ and sICAM-1 production 6-10 years after the infection. The mechanisms for asthma and wheezing after RSV infection are also different from controls.

