

Poster presentation

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May antihistone antibodies replace antinuclear antibodies (ANA) as a predictor of uveitis in Juvenile idiopathic arthritis?

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from 15th Paediatric Rheumatology European Society (PreS) Congress
London, UK. 14–17 September 2008

Published: 15 September 2008

Pediatric Rheumatology 2008, **6**(Suppl 1):P4 doi:10.1186/1546-0096-6-S1-P4

This abstract is available from: <http://www.ped-rheum.com/content/6/S1/P4>

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Background

Antihistone antibodies (AHA) are an ANA subtype reported to be associated with uveitis in Juvenile idiopathic arthritis (JIA). Enzyme-linked immunoassays (E-ANA) are increasingly used as a more standardized alternative to the immunofluorescence method on Hep-2 cells (IF-ANA). E-ANA, however, show no association with uveitis and should not be used in the diagnostic work-up of JIA.

Materials and methods

Sera of 100 children with JIA and 60 healthy children were analyzed for antihistone IgM/IgG (Pharmacia ELIA kit), for E-ANA and IF-ANA. Patients were recruited prospectively and followed at regular intervals from onset of disease in 1997–2004.

Results

Of the 100 children with JIA, 16 developed asymptomatic chronic uveitis; mean observation time was seven years. Antihistone IgM/IgG > 30 U/ml were found in six of the 100 children with JIA, four of whom developed uveitis, and in one of the controls. However, exploring lower cut-off levels of AHA, we found uveitis in 13 of 44 patients with AHA > 8 U/ml. Analyses of predictors for uveitis show that young age at onset of arthritis, AHA > 8 U/ml and IF-ANA titer > 1/320 carry significantly increased risk of developing uveitis. No significant increased risk is

found for the oligoarthritis subtype, female gender, positive E-ANA and IF-ANA titer > 1/80.

Conclusion

Antihistone IgM/IgG are significantly associated with uveitis in JIA children. AHA at a low cut-off level, show comparable test performance as IF-ANA, in predicting uveitis. As E-ANA replaces IF-ANA in many laboratories, further studies are needed to confirm the value of the AHA in risk stratification for uveitis screening.