



POSTER PRESENTATION

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Increased tryptase in children with allergic reactions to hazelnut

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Background

Mast cells are activated during allergic reactions, releasing inflammatory mediators that include tryptase. This process leads to the symptoms of an allergic reaction. A transient increase in the total level of serum tryptase indicates mast cell activation, e.g. an anaphylactic reaction. This may help to confirm and assess the extent of a systemic reaction. In the current study, the total level of serum tryptase was measured at different time points; before, during and after double-blind placebo-controlled food challenge (DBPCFC) with hazelnut in 40 suspected hazelnut allergic children aged 6-18 years. Total serum tryptase was measured with ImmunoCAP Tryptase, Thermo Fisher Scientific, Uppsala, Sweden.

Results

Of the 40 children, eight were positive during the DBPCFC. Of these, five showed an increase in serum tryptase concentrations during or after challenge that was >20% compared to serum tryptase base line levels. Two patients had a >20% increase of tryptase when eating placebo and without reporting any symptoms. In addition, the serum baseline tryptase levels in the children experiencing a clinical reaction were statistically higher compared with the non-responding children ($p < 0.05$).

Conclusion

Our results show that tryptase measurement can be a valuable objective tool for confirmation of mast cell activation during DBPCFC in children. The results further indicate that measurement of tryptase may have a predictive value as indicator for a systemic response during DBPCFC.

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