



POSTER PRESENTATION

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The use of recombinant fish parvalbumin Gad c 1 in the characterisation of fish allergic patients

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Background

IgE mediated allergy to fish is a cause of severe anaphylactic reactions. Parvalbumins are considered major fish allergens and also responsible for cross-reactivity.

Objective

Evaluation of tolerance acquisition using the recombinant fish parvalbumin (Gad c 1) in a group of fish allergic patients (pts).

Material and methods

We selected 55 pts (34M, 21F; average age:7.4 years). All had fish allergy, characterized by positive clinical history, skin-prick tests and serum specific IgE to several fish and Gad c 1 (UniCap[®], Thermo-Fisher). Oral food challenge was performed to evaluate fish tolerance acquisition. Statistical analysis was performed using GraphPad Prisma version 5.0 (GraphPad Software Inc, SD). Two groups were compared using a paired t test Wilcoxon. P values<0.05 were considered significant.

Results

The 55 fish allergic pts had clinical symptoms for more than one fish species: 43 (78%) pts had skin manifestations, 12 (22%) anaphylaxis, 8 (15%) respiratory and 9 (16%) gastrointestinal symptoms. Pts who suffered anaphylaxis had lower Gad c 1 average values (31 KU/L) than the others (76.7 KU/L); $p=0.15$. 38/55 (69%) pts were intolerant and 17/55 (31%) pts tolerated at least one fish species. Gad c 1 average values were significantly higher (21.6 KU/L) in the intolerant group than in the partially tolerant group (2.7 KU/L); $p=0.009$. 24/38 pts were followed for at least one year, on average 3.7 years. 14/24 pts developed fish tolerance to at least one fish species-Group I (10M, 4F; average age 7 years) and 10/24 were intolerant-Group II (6M, 4F;

average age 7 years). Group I showed lower average values (4.6 KU/L) of Gad c 1 than the Group II (25.1 KU/L); $p=0.0001$.

Conclusions

Lower Gad c 1 values seem to be an important predictive parameter in fish tolerance acquisition but not in predicting clinical symptoms' severity and might be considered a useful tool in the follow-up of fish allergic patients.

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