

Case report

Re-sensitization to fish after a temporary tolerance

**C. De Frutos, L. Zapatero,
A. Rodríguez, R. Barranco, E. Alonso,
M. I. Martínez**

Sección Infantil del Servicio de Alergia, Hospital
General Universitario Gregorio Marañón, Madrid,
Spain

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Consolación De Frutos Moreno
C/ Ayala, 57 7º D
28001 Madrid
Spain

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Fish, following egg and cow milk proteins, is one of the food allergens most observed in children in Spain. Half of the allergic children are able to eat fish after a fish-free diet period. Tolerance to this food, once acquired, is usually permanent.

We present two cases of fish allergy, in which the symptoms reappeared after a temporary tolerance.

Case A

A 2-year-old child suffered several episodes of macul-erythematous facial exanthema and facial angioedema just after eating sole and hake. Allergologic study: skin prick test (SPT) was positive to cod, sole, hake and negative to *Anisakis simplex*. Specific IgE was positive to hake (1.31 kU/l), sole (2.90 kU/l) and cod (9.45 kU/l). He was recommended to follow a fish-free diet.

After a fish-free diet of 3 years, his SPT became negative to hake, sole and cod, and specific IgE negative to hake, cod and sole. An open oral challenge was performed and he was able to eat hake (200 g) without any symptoms, so a normal diet was permitted.

The child ate regularly fish twice a week during 8 months with good tolerance and then began suffering oral allergy syndrome with hake, sole, tuna and salmon. At this moment, SPT was positive to cod, sole, hake and tuna and specific IgE turned positive to hake (5.3 kU/l), sole (2.9 kU/l), cod (6.7 kU/l) and tuna (5.3 kU/l).

Case B

A 5-year-old child suffered several episodes of perioral erythema, lips edema and dysphonia a few minutes after eating sole and hake. Neither bronchial nor other symptoms were observed. Allergologic study: SPT was positive to cod, sole, hake and negative to *Anisakis simplex*. Specific IgE was positive to hake (1.86 kU/l), sole (2.47 kU/l) and cod (12.8 kU/l). Fish-free diet was recommended. He did not eat any kind of fish during 4 years and then his SPT became negative to cod, hake, sole and tuna. Also specific IgE became negative to cod, hake, sole and tuna. An open oral challenge was performed and was negative with sole (250 g). Fish was reintroduced in his diet.

He ate frequently fish and 2 months later he developed oral pruritus, lips angioedema and dyspnea after sole ingestion. Also SPT and specific IgE turned positive to hake (0.8 kU/l), sole (0.4 kU/l), cod (1.12 kU/l) and tuna (1.17 kU/l).

Discussion

Allergy to fish is common among fish-eating populations. It is reported that 22% of food-hypersensitive patients in Spain are sensitive to fish. Some patients may have a single symptom, but more often there is a multi-organ involvement (1).

A recent study with 60 fish allergic Spanish children shows that first allergic reaction often occurs about the

age of one, when fish is been introduced in children diet. It also indicates that sole is the most frequent fish implicated, followed by hake (2).

In this group, 43.4% of hake and 45% of sole allergic children tolerated them after a variable fish-free diet period (3).

Our two patients also tolerated fish after a fish-free period, but they re-sensitize to fish after 8 and 2 months, respectively.

In conclusion, some fish allergic children may re-sensitize to fish after a short time of tolerance. This

temporary tolerance can possibly be caused by a short loss of immune memory.

No food re-sensitizations have been previously reported, but this temporary tolerance is also been observed in some cow milk allergic children in our allergy department.

We think it may be useful to monitor these children (who reintroduce an aliment after an exclusion diet period) with prick test and specific IgE determinations for a few years during the tolerance period.

References

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