

Changes in diet and life of children with food allergies after a negative food challenge

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Food allergy (FA) impacts on quality of life (1). Oral food challenge (OFC) is the gold standard for diagnosis or evaluation of acquired tolerance (2). Negative OFC in cases of previously diagnosed FA should logically be followed by a regular and normal consumption of the tested food, in order to maintain the tolerance (3). Recurrences are described (4).

Our aim was to evaluate the consumption of the food tested after a

negative OFC, the frequency of recurrent allergic reactions and the consequences on daily life.

A questionnaire was sent to the families of all children with a negative open OFC between January 2004 and December 2005. Each child could have had more than one negative OFC. The questions concerned the FA, the consumption of the food after the OFC, the recurrence of symptoms, and the changes in the life of the children and their families.

75% (83) of 110 questionnaires were returned. They concerned 67 children [median age : 5.2 years (0.9–16.0)], with more than one FA in 68% of cases. Symptoms at time of diagnosis were severe in 17 cases. The main tested foods were hen's egg (27 cases, raw eggs: 17), cow milk (17 cases), peanut (11 cases). Median length of eviction diet before challenge was 3.4 years (0.5–11.3). Median length between OFC and data collection was 2.3 years (1.8–3.5).

The target food was eaten regularly, e.g. at least monthly, in 83% of cases, and in nine cases less frequently. Two families never proposed the food (lentil and tomato) for fear of allergic reaction and three children refused to eat it (almond, peanut, egg). The food was reintroduced within a week in 49 cases

(81%). We didn't find any difference in the frequency of consumption according to the severity of the initial reaction or the food tested.

Six parents reported symptoms after the OFC, never severe, and likely to be related to a FA in four cases (Table 1).

Parents estimated that their life and their children's life were globally improved in 70% and 72% of cases after the negative challenge. Children had new social activities (school outings, birthday parties or school meals) in 56%. The fear of accidental reaction had completely resolved in 37% only, and 17% of the families expressed the persistence of a frequent fear regardless of the existence of another persisting FA. There was no difference in those results according to the severity of the initial reaction, the food concerned or the existence of another persisting FA.

In conclusion we found that the majority of children ate the food on a regular basis, that recurrences of allergic reaction were rare and never severe, and that the daily life was improved. The study emphasizes the importance of a regular follow-up and evaluation of children with FA to avoid unnecessary prolonged elimination diet and to improve quality of life (2, 5).

After a negative food challenge, regular consumption and improved quality of life were the rule.

Table 1. Reactions reported after the negative food challenge

OFC (age, years)	Symptoms at diagnosis	Reaction reported after OFC	Delay	Evolution	Medical interpretation of recurrence
Milk (1.5)	Digestive	Diarrhea	3 weeks	Resolution under diet	Likely
Milk (3)	Digestive	Diarrhea	4 weeks	Resolution under diet	Likely
Milk (4.5)	Cutaneous, failure to thrive	Sneezing after eating cheese	6 days	Other dairy products tolerated	Uncertain
Peanut (3.3)	Digestive, Cutaneous	Urticaria and facial oedema	3 days	Diet	Likely
Peanut (3.9)	Asthma	Facial oedema (biscuits)	?	Regular consumption	Uncertain
Cooked egg (5.2)	Cutaneous	Urticaria (pancakes)	?	Very cooked egg tolerated	Likely

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