Cereal-induced anaphylaxis in an adult after eating a baby cereal formula

T. Asensio*, A. Armentia*, M. Lombardero*, A. Callejo*, G. Martín* and J. Castrodeza*


ABSTRACT

Ingestion of infant cereal formula as a cause of anaphylaxis has been exclusively described in children. We report the case of a man who experienced an anaphylactic reaction after eating his son’s cereal formula. We believe that cereals constitute a rising problem and a hidden allergen that can cause severe reactions. Although these reactions are not fully understood, they may possibly be a life-long event.

Key words: Adult. Cereal. Food allergy.

RESUMEN

La anafilaxis producida por papillas a base de cereales sólo se ha descrito en niños. Presentamos un caso de reacción anafiláctica en un adulto tras ingerir la papilla de su hijo. Creemos que es importante tener en cuenta los cereales como un problema creciente y un alergeno oculto que puede producir importantes reacciones que aún no se comprenden totalmente, pero que posiblemente puedan darse a lo largo de toda la vida.


Type I cereal ingestion response is a special type of food sensitisation because the patient usually is not aware of this allergy1. The reason may be that clinical symptoms do not appear immediately after ingestion of cereal products and, in some cases, may not appear if the patient does not perform exercise at a particular time2.

Cereal baby food as a cause of anaphylactic reaction have been exclusively described in children3. We report a severe anaphylaxis in a 34 years old man, carpenter, previously diagnosed from occupational asthma due to the rye flour added to the wood boards4. He normally tolerated bread and other cereal-based products without any reaction but suffered from oral syndrome after drinking beer and eating mustard. After testing a spoonful of his baby cereal food prepared for his wife (nongluten rice and corn formula), he suffered from a sudden onset of respiratory and gastrointestinal symptoms, paleness and reduced level of consciousness that required emergency room treatment. Skin prick test (SPT) performed with 32 aeroallergens and 20 common food allergens showed no reaction except for wheat, bar-
ley and rye flours and peanut and mustard. Low lev-
els of specific IgE were detected by means of the
Pharmacia CAP system to the SPT-positive allergens (class 2). A double-blind-placebo-controlled-food-chal-
lenge (DBPCFC) performed with 0.1 g of cereal for-
mula in lemon juice was positive (pharyngeal itching
followed by cough and gastrointestinal discomfort).
Figure 1 shows the result of the IgE-immunoblotting
experiment carried out with the patient’s serum.
A broad and non-defined band with a molecular
weight higher than 37 kDa is detected in the baby
food, flours and mustard extract. In addition, a de-
fined 23 kDa band is detected in the corn flour ex-
tract.

Food allergy is a widespread problem within pedi-
atrics. Certain baby formulae appear to be hypoaller-
genic but they may lead to severe immunological
responses. In our case the first contact with the al-
lergen was the inhalation route. The patient’s history
of cereal allergy is currently not fully understood but
may possibly be a life long event.

REFERENCES
1. Aoki T, Kushimoto H. Type I wheat ingestion allergy. A model of
2. Crespo FC, Rodriguez J. Food allergy in adulthood. Allergy
3. Klein SK, Kramers EM, Vrenken WB. Six-month old girl with an
anaphylactic reaction to rice flour, a rare food allergy. Ned Tijd-
Méndez J, Salgado O. Occupational allergy to rye flour in car-