



Over-The-Counter Products and Food Allergy in Children

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Abstract

Over-the-counter medicines are available without prescription, allowing for convenience and facilitating self-care. We report a case of an adverse reaction to a pharmaceutical formula for gingival eruption in a child with milk allergy. The objective of this report is to alert health-care professionals regarding the potential threat of over-the-counter formulations to children with food allergy.

Keywords

Adverse reactions, Milk, Multiple food allergies, Over-The-Counter products, Paediatrics

Introduction

Over-the-counter (OTC) medicines are available without prescription. As the number of OTC drugs rise, concerns regarding misuse increase [1]. In western countries, access to and supply of medicines are governed by a regulatory framework based on the perception of a drug's risks and benefits to the population [2].

There has been a tendency for the public to perceive OTC medicines as safer than prescription medicines, but it has been recognised that OTC have the potential to be harmful [3]. Moreover, the detailed analysis of an OTC's label content is often neglected [3].

The existence of food allergens in medications has already been reported. In clinical daily practice, parents are instructed by the medical staff about the importance of avoiding any food products that may contain the allergen for which their child is allergic. Furthermore, they are taught to recognise the name and synonyms of allergens, as well as other designations for milk proteins, that may be present in any beverages, food products or candy [4]. Nevertheless, this concern is usually neglected regarding drugs, although in some countries, specific legislation has been achieved for labelling allergens in drug formulations [5,6].

Case Description

We report a case of an 18-month old boy with atopic dermatitis from 2-months onwards. He had been exclusively breastfed up to 5-months of age, when a generalized episode of urticaria, with face angioedema and cough, occurred, requiring admission to an emergency department. This episode started one hour after the ingestion of his first adapted milk formula. He had a positive skin

prick test to milk, casein, α -lactalbumin and β -lactoglobulin and specific IgE to milk (0.99 kUA/L) and α -lactalbumin (0.93 kUA/L), but not to casein or β -lactoglobulin.

At 8-months, another episode of mild generalized urticaria occurred after an accidental exposure to milk.

The child also had an IgE-mediated allergy to potato. He developed hives and angioedema of the face two hours after his first intake of soup (with potato, courgette and carrot). Later he ate courgette and carrot with no symptoms. He had a positive skin prick test and specific IgE to potato (0.39 kUA/L).

Oral food challenge wasn't performed due to parents' refusal, in light of the occurrence of several subsequent episodes of contact urticaria after exposure to foods containing milk or potato.

Despite strict avoidance of food products with cow's milk proteins and potato, parents reported, from 8 to 12 months, the occurrence of four episodes of facial urticaria and one episode of urticaria of the face and torso accompanied by cough. This episode remitted after the administration of oral cetirizine and prednisolone. Extensive daytime routines about food intake were registered and no culprit was identified. Parents were asked to keep diaries of all food and drugs ingested, and noticed that before all episodes of urticaria an over-the-counter gingival gel for tooth eruption pain had been applied. When inquired about the frequency of its use, parents said that the gingival gel was used only when strictly necessary and realised that it had only been used before the referred episodes of urticaria.

They were requested to bring the gel to the outpatient clinic (*Mitosyl gingival gel*[®]) and it was proven to contain lactoserum proteins. Skin prick tests were performed in 10 healthy adult controls and were negative in all of them, but positive in the patient.

The parents never considered the gingival gel as a possible culprit, since it was not a food or a drug, the only items referred to by the medical staff. The gel was suspended and no other adverse reactions were noted. The child was followed in the Immunoallergy Department, and specific IgE to milk proteins diminished progressively, till they became negative. At 17-months, an oral challenge to milk and to the gingival formula was performed and was negative.

Recently, a generalized episode of urticaria occurred in the kindergarten after an accidental ingestion of a small amount of mashed potato, and it was controlled with oral cetirizine.

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Discussion

The objective of this paper is to alert health-care professionals regarding the potential threat of over-the-counter formulations to children with a food allergy and to underline the importance, in daily clinical practice, of alerting parents to investigate the constitution of these products.

To our knowledge, this is the first report of a child with cow's milk allergy, with clinical symptoms, one of which moderate to severe, due to the exposure of undisclosed milk proteins in gingival formulas. These formulas are commonly used by the general population to ameliorate local pain due to teething, in children.

Conclusion

Food allergy has implications in a child's daily routine. Parents are advised to avoid the allergen food sources, but this concern is neglected regarding OTC products due to the public's generalized tendency to perceive OTC medicines as safe. Therefore, detailed analysis of an OTC's constitution is often neglected. Our aim is to alert about the threat of OTC to children with food allergy and to underline the importance of recommending parents to exhaustively review all OTC labels.

Ethical Statement

Informed consent was obtained prior to this publication.

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Conflict of Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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