

a-s IgE ab levels against peanut, at 5 years of age.

**Conclusion:** Early IgE sensitization to any of the allergens measured increases the risk of developing a stronger IgE sensitization later in life. High a-s IgG and/or IgG4 levels against peanut do not seem to prevent high levels of a-s IgE against peanut.

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**Food-dependent exercise-induced anaphylaxis**

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**Case record:** A 18-year-old male patient, with allergic rhinitis since the age of 14, showed an anaphylactic reaction while he was playing football just after eating an apple. Few minutes after the ingestion of one apple and when he was playing football with his friends the patient showed generalized pruritus, diffuse erythema, hives, facial edema, cough, hoarseness and dysphonia. He was carried to an emergency unit and was treated with 0.3 ml subcutaneous epinephrine (1/1000), subcutaneous dexchlorfeniramine (5 mg) and intravenous methylprednisolone (40 mg). He was non smoker, he had no pets and he lived in a dry and sunny flat in Madrid. In the previous hours the patient took aspirin because a headache. He was referred by his family physician because

the severe reaction showed above. He studied nursery. He had a family history atopy since his father and one brother had allergic bronchial asthma. No allergic reactions to drugs nor foods were referred previously.

**Diagnostics test:** Skin prick tests to inhalants were positive to grass pollen and negative to the pollens, house dust mites, animal dander and moulds. Blood tests were within normal parameter. Skin prick test to foods were positive to apple and negative to other fruits, dry fruits and latex. Total IgE: 240 U/ml. Specific IgE for *Lolium perenne* 14 kU/l and apple 2.4 kU/l. A basal forced spirometry revealed a normal lung function. Exercise challenge test without previous ingestion of apple was performed at the office and well tolerated. Aspirin challenge test (single blind placebo controlled) was performed at the office and well tolerated.

**Diagnosis:** A diagnosis of food-dependent exercise-induced anaphylaxis was made.

**Treatment and follow up:** A diet avoiding apple was started. The patient was discharged with a prescription for an epinephrine injector, education on use and indications. He was advised to avoid eating apple and other fruits for, at least, 6 h prior to exercise. Since the diagnosis the patient is totally asymptomatic and he is practising all types of physical activities, including football, without clinical manifestations. The patient is eating other fruits with good tolerance. He is taking aspirin with good tolerance.

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**Contribution of *in vitro* methods to the study of fruit allergy clinical patterns**

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**Background:** Immunoblotting and immunoblotting inhibition essays have been used for many years to investigate cross reactivity in food allergic patients. The use of component resolved diagnostics, in the form of ImmunoCAP ISAC<sup>R</sup>, has emerged as a new *in vitro* method to study these patients, allowing the simultaneous determination of multiple allergenic components in a single step.

**Patients and methods:** We reviewed the clinical files of patients observed in our Immunoallergy consultation in the year 2008. The patients that had undergone ImmunoCAP ISAC<sup>R</sup> as well as immunoblotting and/or inhibition immunoblotting assays were selected. We then proceeded to compare the results in a case-to-case basis.

**Results:** Six patients were evaluated (5 F/1 M, mean age 37 years). Three patients presented food allergy and pollinosis, three isolated food allergy and two were also allergic to latex. The clinical manifestations ranged from isolated oral allergy syndrome (oas), urticaria (u) and angioedema (ag) to dyspnoea (dysp) and glottis oedema (go).

**Table 1.** For abstract 603.

	Patients					
	1	2	3	4	5	6
Fruits	Peach	Apple, peach	Peach	Apple, peach	Kiwi, peach, chestnut	Kiwi, banana, chestnut
Symptoms	u + ag + dysp	oas + dysp	u + ag + go	u + rc	u + ag + dysp + go	u
SPT	Peach +	Peach, apple +	Peach +	Peach and apple +	Chestnut +	Kiwi +
Specific IgE	1.7 kU/l	Apple 3.29 kU/l, peach 10.1 kU/l	Peach 1.06 kU/l	Peach 3.0, apple 0.79 kU/l	Latex 49.0 kU/l	Latex 2.0, kiwi < 0.35 kU/l
ImmunoCAP ISAC <sup>R</sup>	Pru p 3 +	Bet v 1 and Mal d 1 +		Pru p 3 +		Hev b 5.0101, Hev b 6.02, Hev b 11.0101 +
Immunoblotting essays (molecular weight of predominant binding bands)	<i>Poa pratensis</i> – 14.42 and 30.15–34.24 kDa	<i>Betula verrucosa</i> – 16.49 kDa	<i>Poa pratensis</i> – 15.9 and 30.3 kDa	Peach – 13.55 kDa	Latex – 39.38, 110.0 and 82.77 kDa	Latex – 26.07 and 31.15 kDa
	Peach – 13.66	Peach – 19.33 kDa	Peach – 15.5 kDa	Apple – 12.62 kDa	Chestnut – neg	Kiwi – 24.34 kDa
Immunoblotting inhibition	No inhibition between <i>Poa</i> and peach	Apple – neg. nd	Partial inhibition of peach by <i>Poa</i>  No inhibition of <i>Poa</i> by peach	nd	No inhibition between chestnut and latex Partial inhibition of kiwi by latex	Partial inhibition of latex by kiwi