French Allergy vigilance Network reports about severe anaphylactic reactions to Foods from 2001-2004

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The increased prevalence of food allergies points to the need of an Allergyvigilance Network, created since January 2001 (1). The main objectives are to index the cases of lethal or prelethal anaphylaxis and to evaluate the risk of new foods (2, 3) .

Materials and Methods

The network is composed of 330 trained allergists. Around 80 declared severe anaphylaxis cases: anaphylactic shocks (AS), laryngeal angioedema, severe acute asthma.

Table 1: Clinical manifestations observed during food anaphylaxis reported since 2001

		Childs		Adults	
Total of the observations		94		200	
Major clinical symptoms	**Anaphylactic shock**	34	36.2 %	113	56.5 %
	Severe acute Asthma	6	6.4 %	6	3 %
	Laryngeal angioedema	16	17 %	23	11.5 %
	Serious anaphylactic systemic reaction	38	40.4 %	58	29 %

Table 2 : Food involved in severe allergic reactions

Food Allergens	2002 (107)		2003 (85)		2004 (102)	
Peanut	**n = 14**	**13 %**	**10**	**11.7 %**	**10**	**9.8 %**
Other Legumes	**11**	**10.3%**	**5**	**4.7 %**	**7**	**6.8 %**
Soy	3		3		-	
Lupine	**7**	**6.5%**	1	**1.2%**	7	**6.8 %**
Lentil	1		1		-	
Tree nuts	**16**	**15%**	**13**	**15.3%**	**18**	**17.6 %**
Cashew nut a, pistachio b	5a, 1b		3a, 2b		6a	
Hazelnut	4		2		2	
Pine kernel	1		1		4	
Walnut, chestnut	2a		2a, 2b		2a, 1 b	
Almond a , Brazil nut b	2a, 1b		1b		1b	
Latex cross-reacting Food	**13**	**12.1%**	**5**	**5.9%**	**11**	**10.8%**
Avocado a, kiwi b	4a, 2b		-		1b	
Buckwheat	3	2.8 %	4	4.7%	8	7.8 %
Banana a, fig b	1a, 2b		-		2a	
Melon a, jack fruit b mango c	1a		1b, , 1c		-	
Wheat	**7**	**6.5 %**	**4**	**4.7%**	**7**	**6.8%**
Celery	**5**	**4.7%**	**3**	**3.5%**	**9**	**8.8%**
Sunflower seed	-		-		1	
Fennel	-		1		-	
Chicory a, artichoke b	1		1a, 1b		-	
Mustard a, beetroot b	1a		1 b		-	
Garlic a, Onion b, shalott c	-		1a, 1 c		1a, 1 b	
Peach a, apple b, pear c	2a, 1c		-		1b	
Hemp a, Blackberry b	-		1b		1 a	
Sesame	**3**	**2.8 %**	**2**	**2.4%**	**2**	**1.9%**
Crustaceans	**10**	**9.3 %**	**9**	**10.6%**	**10**	**9.8 %**
Shrimp	9	8.4 %	7	8.2 %	8	7.8 %
Crab, speedercrab	1		1		1	
Molluscs	**6**	**5.6 %**	**10**	**11.7%**	**5**	**4.9%**
Snail	**5**	**4.7%**	**8**	**9.4%**	**5**	**4.9%**
Cuttlefish, calmar	1		1		-	
Scallop a, oyster b	-		1a		1b	
Milk	**3**	**2.8 %**	**11**	**12.9%**	**6**	**5.9%**
Cow's milk	3		9		1	
goat a, ewe b, mare c milk			1a, 1b		2a &b, 1c	
Egg	**-**		**-**		**2**	**1.9%**
Hen egg a, goose b	-		-		1a, 1b	
Meat, offals	**4**	**3,7%**	**3**	**3.5%**	**1**	**0.9%**
Poultry	2		-		-	
Pork a, Bovine albumine serum b	1a		1 b		-	
Kidney	1		2		1	
Fish	**2**	**1.9%**	**-**		**1**	**0.9%**
Pollens a, *S. cerevisiae* b	-		1a		1a, 1 b	
Quinine (Schweep's)	1		-		-	
House dust mites	-		-		1	
Sulfites a, Inuline b	1a		-		2 a, 1 b	
Idiopathic Shock	**4**	**3.7%**	**3**	**3.5%**	**1**	**0.9%**

Table 3: Particularities of the food anaphylaxis reported since 2001

	2002	2003	2004
Admission in Emergency Unit	**89 %**	**73 %**	**72.6%**
Epinephrine injection	**55 %**	**49,5 %**	**44.1%**
Hospitalization	**65,4%**	**52 %**	**53.9%**
Associated factors : **Exercice** **Alcohol** Aspirine, NSAI Inhibitor of ACE Sirolimus, Tacrolimus ♌ Blocklors Sartans	**17 (15.9%)** **4 (3.7 %)** **5** **-** **-** **4** **1**	**5 (5.9 %)** **5 (5.9 %)** **1** **-** **-** **4** **2**	**16 (15.7 %)** **10 (9.8 %)** **4** **1** **1** **5** **1**
Ingestion of masked allergens	**14 cases** Peanut: 6 Lupine: 4 Hazelnut: 1 Walnut :1 Sesame : 1	**7 cases** Peanut : 4 Lupine : 1 Walnut: 1 Cow's milk : 1	**17 cases** Lupine : 4, Buckwheat :2 Peanut : 2, Celery :2, Mites :1, Wheat isolate :1, Ewe milk : 2 ; nuts : 1 Egg : 1; Cow's milk : 1

Results

From January 2001 to December 2004, the register encloses 294 cases (32% children and 68% adults): 3 cases of lethal anaphylaxis have been recorded. The most important allergens were peanut (11.5%), tree nuts (16%), other Legumes (7.8% including lupine 5.1%), latex cross-reacting foods (9.9%), wheat (6.1%) and celery (5.8%).
Anaphylaxis to crustaceans (9.9% including shrimps 8.2%) and mollusks (6.5% including snails 6.1%) are especially observed in patients allergic to dust mites.
The major associated risk factors were exercise (13%) and alcohol (6.5%). Wheat is the main allergen in exercise-induced.
If peanuts and tree nuts are the first cause of food anaphylaxis in France, they are not as important as in USA, concerning only 27.5%.
The incriminated foods are extraordinarily various, reflecting the French gastronomic habits. 5 AS (including 1 death) were attributed to masked peanut in macaroons.
Declaration of lupine (4) is not required according to the new European Community food labelling legislation, even though the main cause of masked food anaphylaxis (9/34 cases).

Conclusion

This Allergovigilance Network provides helpful data, especially for the National Agency for Safety of Foods and the French Customs and Frauds Authorities.

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