

LETTER TO THE EDITOR

Self-diagnosed drug allergies: the belief of patients

Editor,

The term of 'drug allergy' (DA) may include true hypersensitivity or non-allergic reactions. The rate of self-reporting DA ranges from 4.7% to 11% regardless of age.^{1–5} When patients report a DA, the medical team often decides a full and definitive elimination of the incriminated drug from future therapy, which

deeply affects medical care.^{2,6,7} Previous studies emphasized that despite important therapeutic and economic impacts, only 3.2% to 6% of patients with reported DA had allergologic investigations.^{5,8}

We aimed to investigate retrospectively the prevalence and characteristics of self-reported DA in outpatients consulting in dermatology and rheumatology departments and to determine whether a retrospective medical questionnaire could discriminate true drug hypersensitivity from intolerance.

Table 1 Results of the first questionnaire (83 patients reported 92 previous allergic events)

	Total (83 patients, 92 events)	Dermatology department (39 patients, 44 events)	Rheumatology department (44 patients, 48 events)	P-value
No. of drugs incriminated, <i>n</i> (%)				
1	78 (84.8)	42 (95.5)	36 (75.0)	0.008
≥ 2	14 (15.2)	2 (4.6)	12 (25.0)	0.008
Type of culprit drug, <i>n</i> (%)				
Unknown	6 (6.5)	6 (13.6)	0	0.01
Antibiotics	34 (37.0)	16 (36.4)	18 (37.5)	1
Betalactams	23 (25.0)	14 (31.8)	9 (18.8)	0.16
NSAID	11 (12.0)	3 (6.8)	8 (16.7)	0.2
Aspirin	9 (9.8)	4 (9.1)	5 (10.4)	1
Iodinated contrast	8 (8.7)	4 (9.1)	4 (8.3)	1
Topical (antiseptic, NSAID)	4 (4.3)	2 (4.5)	2 (4.2)	1
Aerosol (unknown molecule)	1 (1.1)	1 (2.3)	0	0.48
Clinical manifestations reported by the patient, <i>n</i> (%)				
Cutaneous lesions	63 (68.5)	35 (79.5)	28 (58.3)	0.03
Skin modifications	48 (52.2)	26 (59.1)	22 (45.8)	0.22
Itching	36 (39.1)	16 (36.4)	20 (41.7)	0.67
Swelling	31 (33.7)	15 (34.1)	16 (33.3)	1
Cutaneous only	44 (47.8)	29 (65.9)	15 (31.3)	0.0009
Digestive	40 (43.5)	10 (22.7)	30 (62.5)	0.0001
Extracutaneous only	24 (26.1)	8 (18.2)	16 (33.3)	0.11
Person who diagnosed allergy, <i>n</i> (%)				
Unknown	9 (9.8)	2 (4.5)	7 (14.6)	0.16
Patient and relatives	24 (26.1)	10 (22.7)	14 (29.2)	0.63
Physician	60 (65.2)	32 (72.7)	28 (58.3)	0.15
General practitioner	21 (22.8)	13 (29.5)	8 (16.7)	0.14
Dermatologist and/or allergist	7 (7.6)	7 (11.3)	2 (4.2)	0.08
Allergy always declared by the patient to the physician, <i>n</i> (%)	80 (87.0)	38 (86.4)	42 (87.5)	0.87
Drug stopped, <i>n</i> (%)				
Yes	72 (78.3)	38 (86.4)	34 (70.8)	0.07
No	12 (13.0)	6 (13.6)	6 (12.5)	1
Missing data	8 (8.7)	0	8 (16.7)	0.006

NSAID, non-steroidal anti-inflammatory drug.

Table 2 Results of the second questionnaire (35 patients reported 45 previous supposed allergic events)

Drug family	
Antibiotics	14 (31.1)
Betalactams	8 (17.8)
NSAID	6 (13.3)
Acetylsalicylic acid	4 (8.9)
Iodinated contrast	4 (8.9)
Anti-TNF therapy	2 (4.4)
Quinine	2 (4.4)
Non-fragmented heparin	1 (2.2)
Systemic treatment	37 (82.2)
Topical treatment	7 (15.6)
Aerosol	1 (2.2)
Time since diagnosis (year), mean (SD)	14.4 (13.2)
Time from drug intake to allergy	
Several seconds or minutes	14 (31.1)
Several hours	17 (37.8)
Several days	8 (17.8)
Several months	1 (2.2)
Several years	1 (2.2)
Unknown	4 (8.9)
Reaction after the first take of drug	
Yes	23 (51.1)
No	5 (11.1)
Unknown	17 (37.8)
Clinical manifestations	
Cutaneous	35 (78.8)
Cutaneous only	19 (42.2)
Cutaneous and respiratory	10 (22.2)
Cutaneous and haematologic	1 (2.2)
Cutaneous and digestive	4 (8.9)
Cutaneous and nephrologic	1 (2.2)
Cutaneous and systemic	9 (20)
Extracutaneous only	9 (20)
Unknown	1 (2.2)
Reaction assessed by a physician	37 (82.2)
Diagnosis made by the physician	
Diagnosis of allergy	26 (57.8)
No diagnosis	9 (20)
Non-allergic diagnosis	2 (4.4)
Reaction consequences	
Prescription interruption	38 (84.4)
Hospitalization	7 (15.6)
Intensive care unit	2 (4.4)
Sequelae	4 (8.9)
Skin tests performed	9 (20.0)
Positive results	4 (8.9)
Negative results	3 (6.7)
Results unknown	2 (4.4)
Resumption of the culprit drug	
Yes with new reaction	11 (24.4)
Yes without any problem	4 (8.9)

Table 2 Continued

No	29 (64.4)
Unknown	1 (2.2)
Most likely diagnosis at the end of the questionnaire	
Allergy with cutaneous manifestations	27 (60.0)
Allergy with extracutaneous manifestations	4 (8.9)
Drug intolerance and not allergy	7 (15.6)
Other diagnosis	7 (15.6)
Would you take the incriminated drug again if a specialist told you that you are not allergic to it?	
Yes	11 (35.5)
No	20 (64.5)

*Fourteen patients were not asked this question because of positive skin test results, severe adverse events, withdrawal from the market of the culprit drug and non-allergic contraindications.

Data are *n* (%) unless indicated.

NSAID, non-steroidal anti-inflammatory drugs; SD, standard deviation.

In January 2016, a self-assessment questionnaire was distributed to consecutive outpatients consulting in dermatology and rheumatology departments of one university hospital (patients consulting the allergologist were excluded). Patients had to report whether they had already had one or several events of DA and to describe its (their) characteristics. Patients with positive answer were thus contacted by phone by the investigators (AJ, AS). They were not examined. After detailed questioning and analysis of results, a true allergic event appeared likely when clinical manifestations and chronology were compatible with classical patterns of cutaneous adverse reactions⁹ and/or when skin tests were positive. Furthermore, the diagnosis of DA was excluded when the culprit drug had been resumed without relapse of symptoms.

Institutional Review Board approval was obtained.

Among 310 patients who completed the questionnaire (158 female, mean age 54.5 ± 17.2 years, 181 from dermatology department), 83 [26.8%, 39 (21.5%) from dermatology and 44 (35.2%) from rheumatology, $P = 0.014$] declared a DA, with a total of 92 different allergic events (Table 1). The culprit drug was most often antibiotics [34/92 (37%)] and NSAIDs or acetylsalicylic acid [20/92 (21.8%)]. The suspected drug was definitively stopped in 72 of 92 cases (78.3%).

Thirty-five patients of 83 (42.2%) could be interviewed by phone, with a total of 45 different allergic events (Table 2). Cutaneous manifestations were reported in 35 cases (78.8%). Allergologic investigations (prick or patch tests) were conducted in nine of 45 cases (20%), with positive results in four cases. At the end of this 2nd questionnaire, the diagnosis of true DA was considered likely for 31 of 45 events (68.9%). For seven cases (15.6%), drug intolerance was assessed, and for seven other cases, a drug reaction was unlikely. Twenty patients (64.5%) declared that they would not take the drug again even if the dermatologist or allergologist told them that the past event was not a true DA.

In our study, the prevalence of self-reported DA was higher than previously reported. It can be explained by the patients' mean age and the inclusion of outpatients from specialized medicine departments, more exposed to medications (NSAIDs, for example, in rheumatology department). A detailed survey enabled the diagnosis of true DA in two-thirds of the cases, intolerance or not drug-related in one-third.

Patients reported allergologic investigations more frequently than previously described (20% vs. 3.2–6%).^{5,8} However, in our opinion, this rate remains too low and we recommend that patch and prick testing should be performed as often as possible to help for the final diagnosis of DA.¹⁰ Most of the patients declared that they would not want to take the drug again even if the dermatologist explained that the suspected allergy was not a true allergy.

The personal conviction of DA was fixed in patients' mind and could impact further therapeutic decision.

After a suspected DA, early consultation in specialized departments is desirable to confirm or not a DA, perform appropriate allergologic skin tests if necessary and deliver a proper allergy certificate.

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