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Clinical and Translational Allergy

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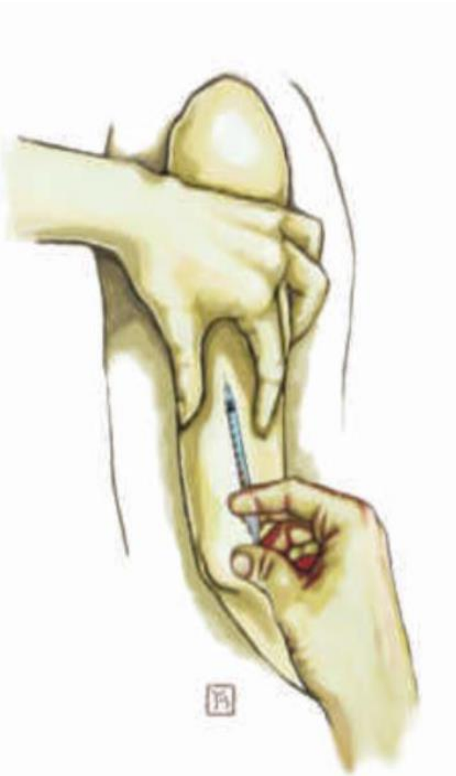


COnsenso Nacional sobre el Diagnostico y tratamientO del paciente con alergia Respiratoria

Diagnosis and allergen immunotherapy treatment of polysensitised patients with respiratory allergy in Spain: an Allergists' Consensus

Carmen Vidal[1*], Ernesto Enrique[2], Angeles Gonzalo[3], Carmen Moreno[4], Ana I Tabar[5] and on behalf of Expert Clinical Participants

Abstract

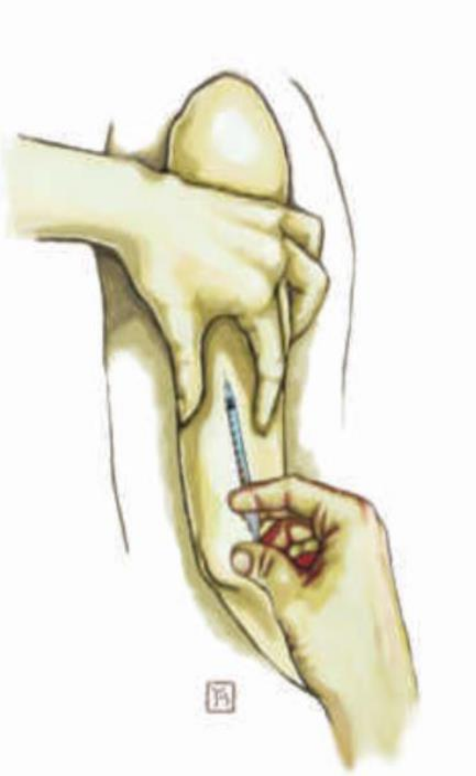
Background: Polysensitisation is common in patients with respiratory allergy in Spain. Selection of the best allergen immunotherapy (AIT) is difficult in polysensitised patients. The present study was designed to help allergists better identify relevant allergens in these patients and to improve the selection of AIT in Spain.

Methods: Sixty-two Spanish allergists answered a survey containing 88 items divided into four groups: 1) general approach to polysensitised subjects; 2) sensitisation profile involving mite, animal dander and moulds; 3) grass and olive pollen co-sensitisation, and 4) other pollen polysensitisation profile (weed and tree pollen). The Delphi method was used.

Results: A consensus was achieved for 83% of items (92%, 81%, 83% and 73% of the four groups analysed, respectively). Only polysensitised patients with clinical relevance should be considered polyallergic. A detailed medical history (clinical symptoms and medication) together with a profound knowledge of allergens present in the patient's environment are essential for diagnosis. Skin prick tests (SPTs) are not adequate to decide the clinical relevance of each allergen. Serum specific IgE against allergen sources adds value to SPT but molecular diagnosis, when possible, is strongly recommended, especially in pollen-allergic patients. Specific allergen challenge tests are difficult to perform and not recommended for daily practice. Regarding AIT composition, up to three allergens can be used in the same vaccine, but only related allergens may be mixed. In some cases more than one vaccine may be needed.

Conclusion: Some criteria have been established to improve diagnosis and AIT prescription in polysensitised patients.

Keywords: Consensus, Delphi method, Respiratory allergy, Polysensitisation, Diagnosis, Allergen immunotherapy



The problem of POLYSENSITIZATION

How can we manage ALLERGEN IMMUNOTHERAPY in POLYSENSITIZED patients?

The Spanish Experience: a National Consensus

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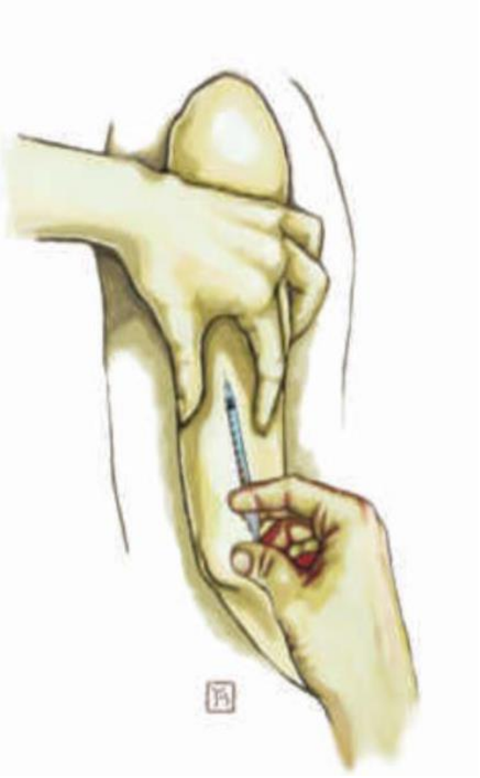
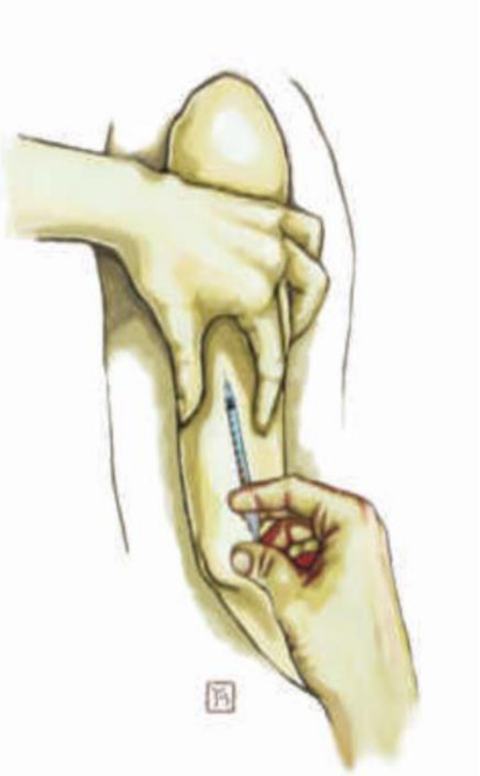
Do we need a consensus to help allergists with Allergen Immunotherapy (AIT)? YES, BECAUSE:



1. Polysensitization is a common problem. Speaking the same language: POLYSENSITIZATION OR POLYALLERGY?
2. Is it possible to identify the primary (genuine) sensitizer in polysensitized patients?

Do we need a consensus to help allergists with Allergen Immunotherapy (AIT)? YES, BECAUSE:



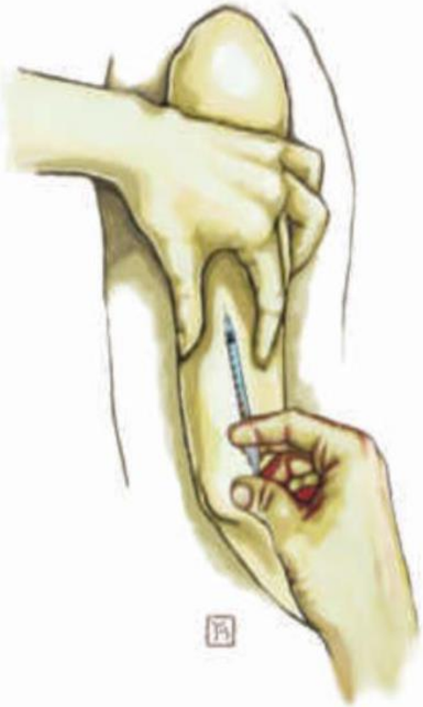
3. What about clinical relevance of each sensitization?
4. How can we deal with AIT in polysensitized-polyallergic patients?

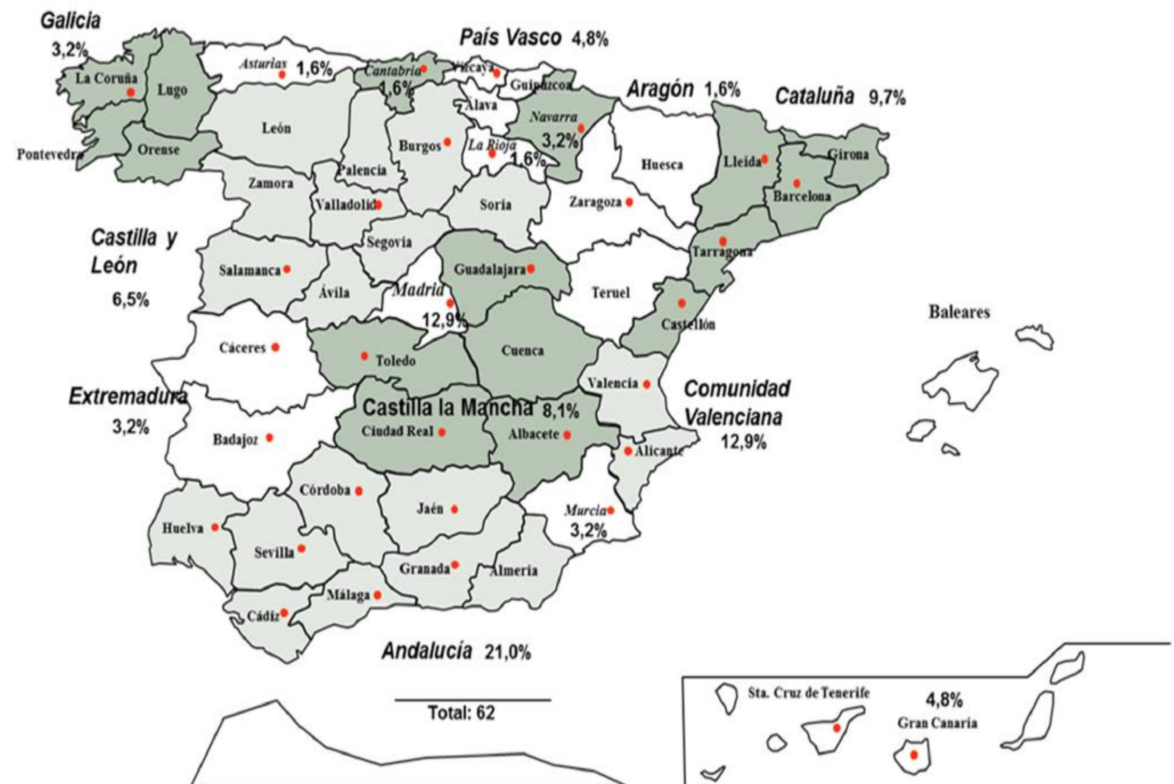
Methodology

Scientific Committee: 5 people

Expert panel: 62 Spanish allergists

Items: 88





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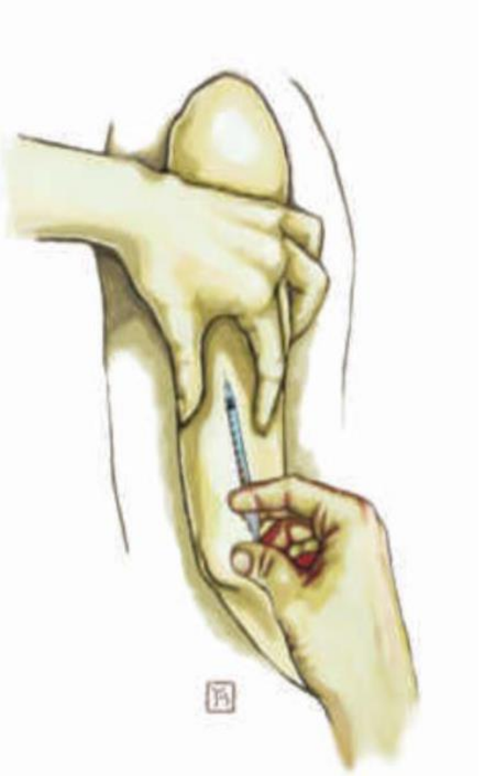
Distribution of panel of allergists in Spain

Methodology



Revision of scientific articles on the topic by the steering committee

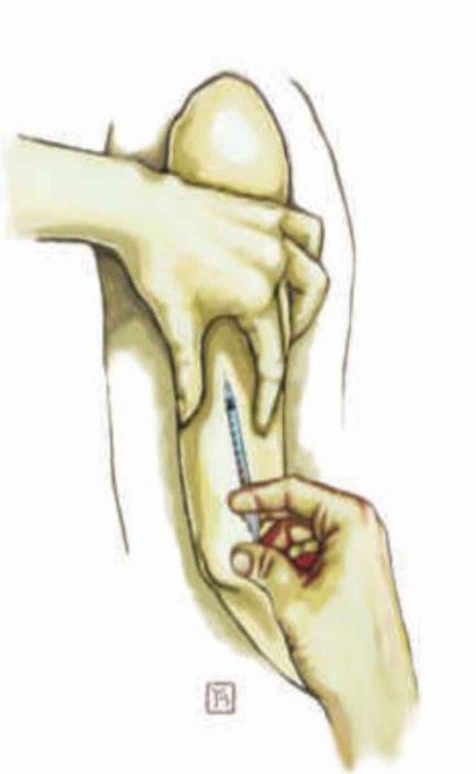
4 topics:

- *General approach*
- *Mite, moulds and animal dander*
- *Grass and olive pollen*
- *Other pollens*

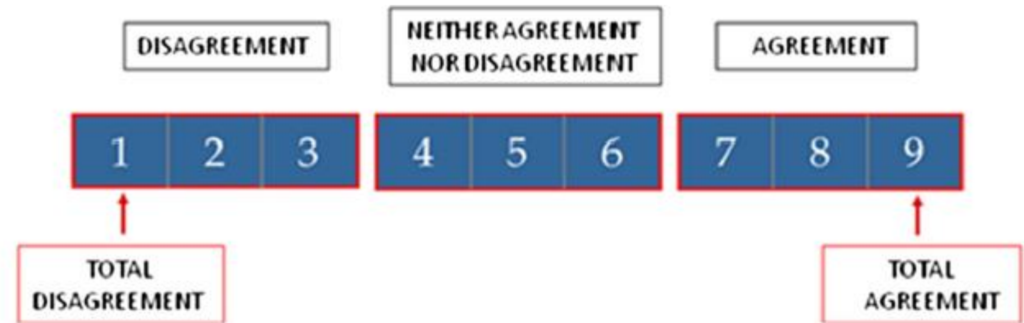
First meeting to define definitive items

Delphi method

Survey and analysis



May-June 2013



Revision of results
Second survey
Definitive results

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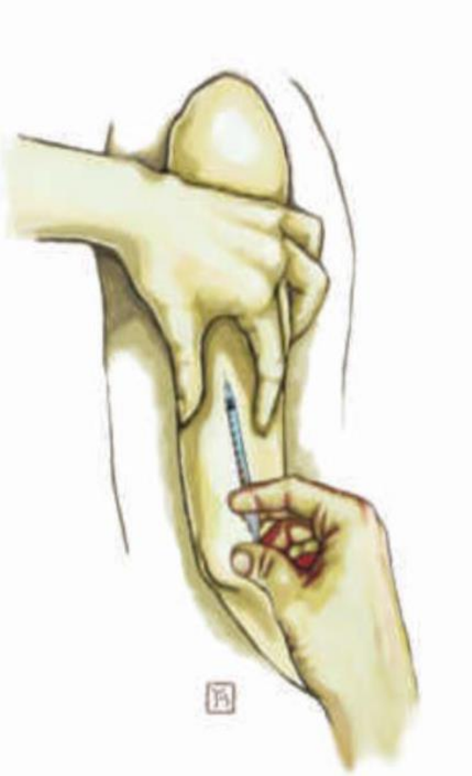
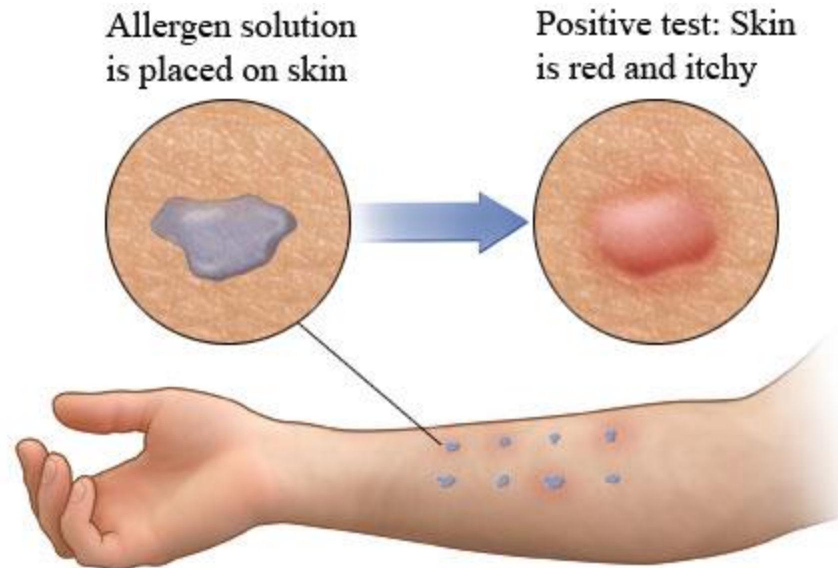
Results

Skin prick tests (SPT) are not enough to identify allergic individuals.





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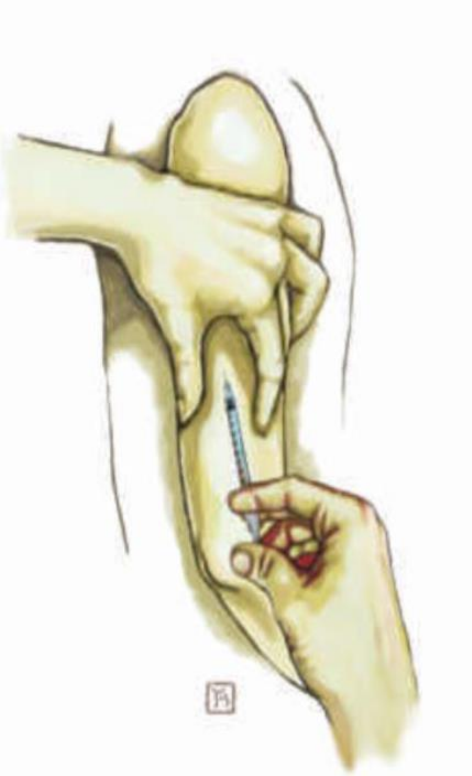
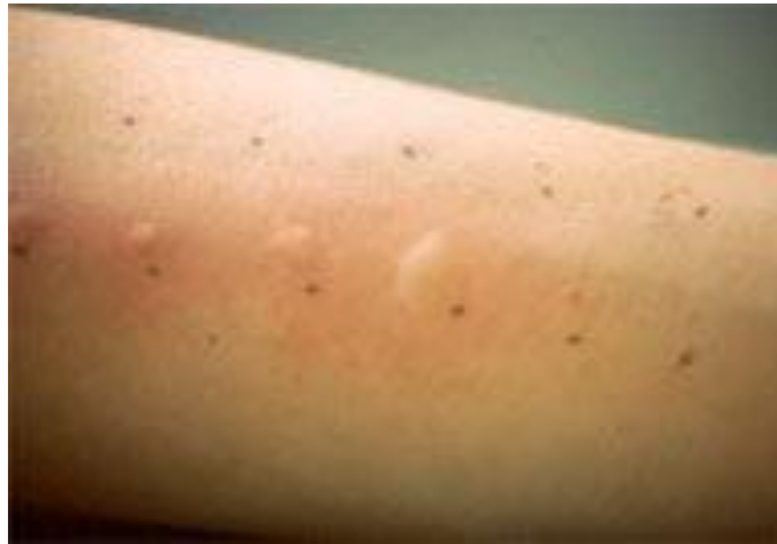
Results



Some allergists think that the size of the papula is of help (NO CONSENSUS ACHIEVED)



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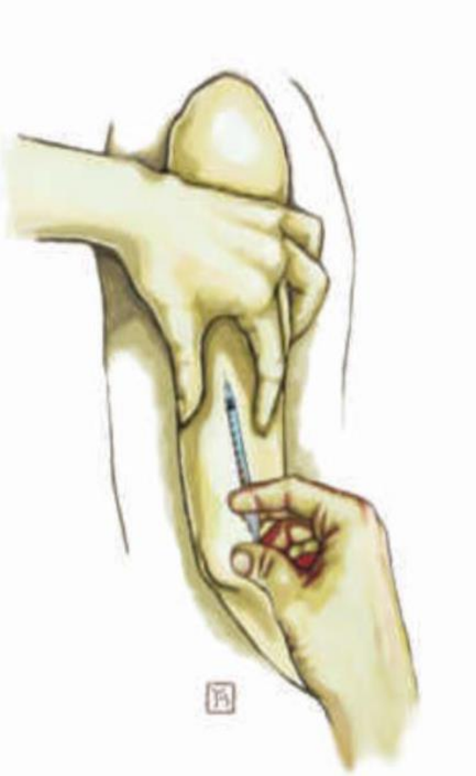
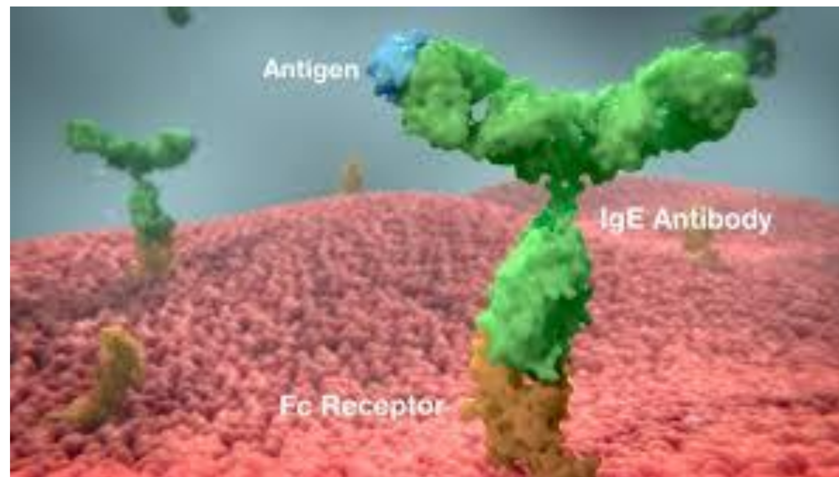
Results

sIgE is a better tool than SPT BUT allergists choose molecular diagnosis to identify GENUINE SENSITIZERS.





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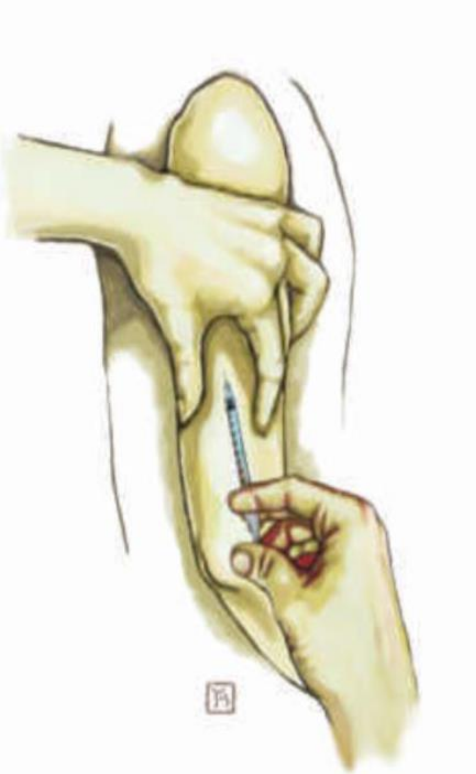
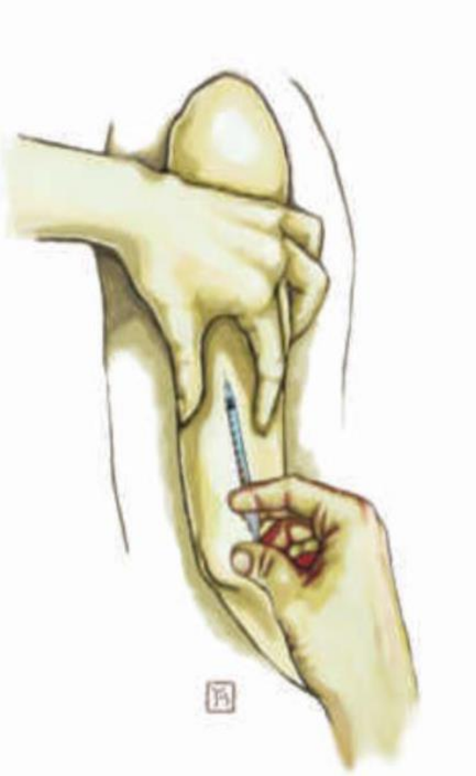
Results

Polysensitization is not the same as poliallergy (it depends on clinical relevance of the allergens)

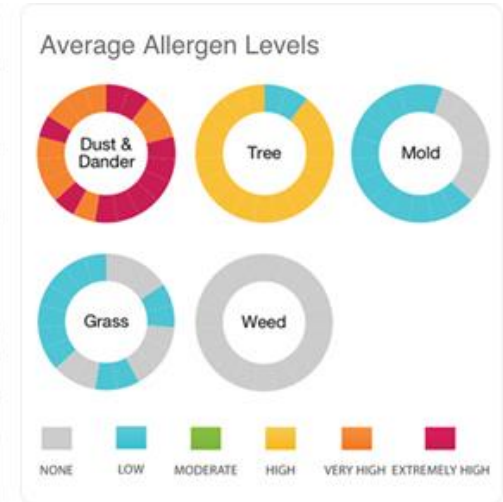


COnsenso Nacional sobre el Diagnostico y tratamientO del paciente con alergia Respiratoria

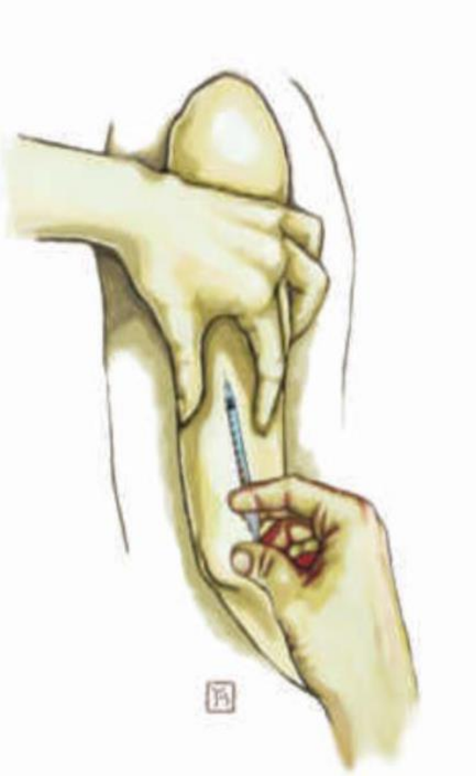
Results



Assessment of the intensity of symptoms and medication consumption in relation to allergenic exposure should be habitual practice in immunotherapy prescription.



Results



Immunotherapy prescription is advised only if relevant allergen sources are identified.

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Allergy to mites, animal dander and moulds

Mites

Knowledge of the predominant type of mites in a geographical area is useful in defining the composition of immunotherapy in an allergic patient

Sensitization to *Lepidoglyphus destructor*, *Tyrophagus putrescentiae*, and *Acarus siro* in patients allergic to house dust mites (*Dermatophagoides* spp.)

Carmen Vidal, PhD,[a] Benilda Chomón, PhD,[b] Celsa Pérez-Carral, MD,[a] and A. González-Quintela, PhD[c] *Santiago de Compostela, Spain*

J Allergy Clin Immunol 1997;100:716-8

Moulds

Most relevant moulds from the allergological point of view are Aspergillus and Alternaria.

Mites and Moulds

If patients are sensitized to both: MITES AND MOULDS, it is mandatory to be sure of clinical exposure to one or both.

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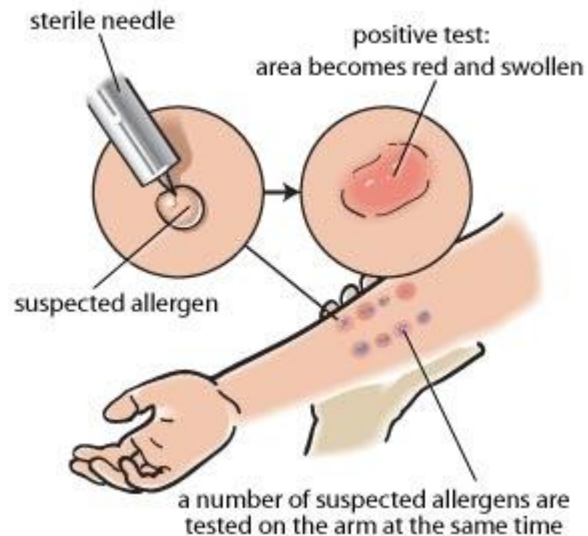
Diagnosis of HDM, mould and animal dander allergy

SPTs are not enough to truly identify patients allergic to house dust mite, mould or animal dander.



Diagnosis of HDM, mould and animal dander allergy

SIgE is better than SPTs

Diagnosis of HDM, mould and animal dander allergy

Molecular diagnosis is not always needed to truly identify these allergic patients (NO CONSENSUS)

What about AIT with these allergens?

Major allergens (Der p 1, Der p 2, Alt a 1) should be quantified in the vaccine.

Different mite species could be mixed in the same vaccine.

What about AIT with these allergens?

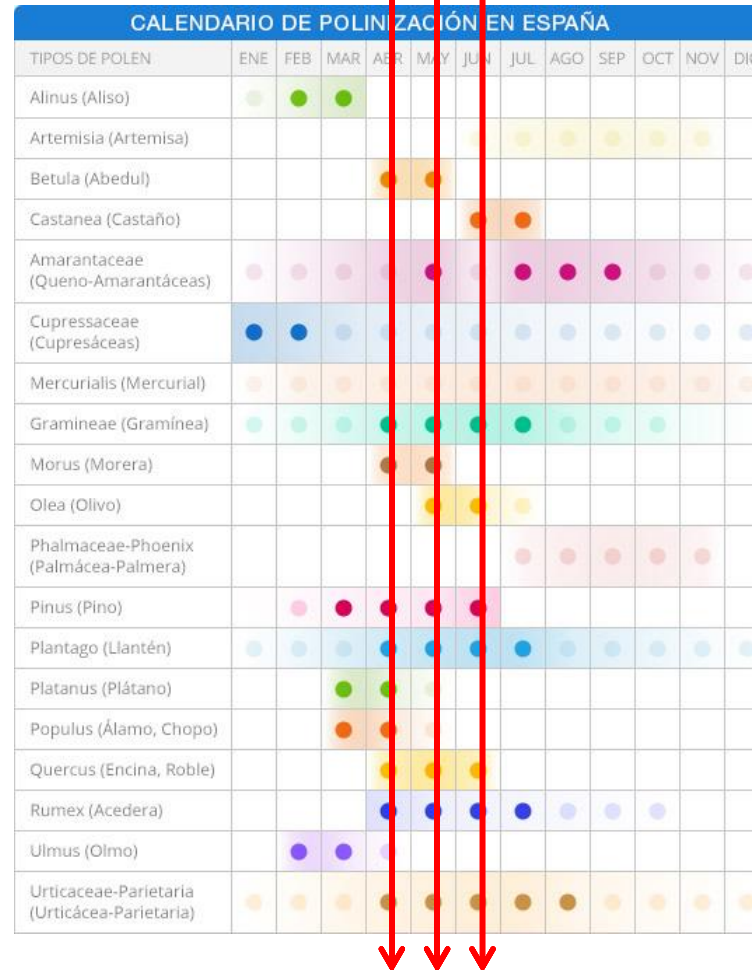
Mites cannot be mixed with any other allergen source.

Allergy to pollens

Sensitization: are all positive results clinically relevant?

NO

Could we know which allergen(s) is (are) relevant just through a calendar?



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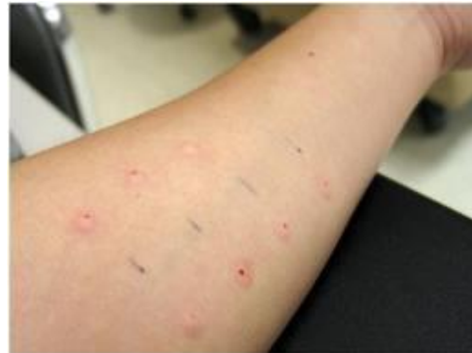
Many coincidences: DIFFICULT

- Olive pollen vs grass pollen

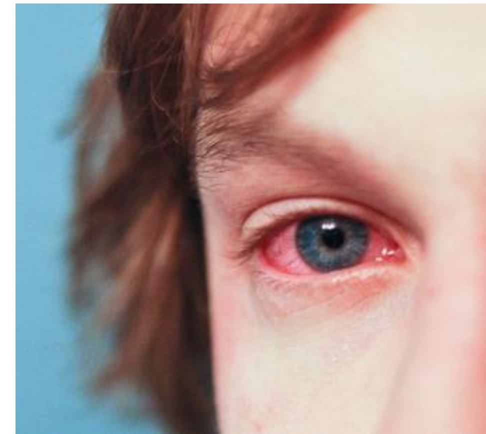
- Other pollens

Allergic to one, allergic to both?

It depends on where our patient is from



Skin tests are not accurate



Challenge tests are difficult to perform on a routine basis

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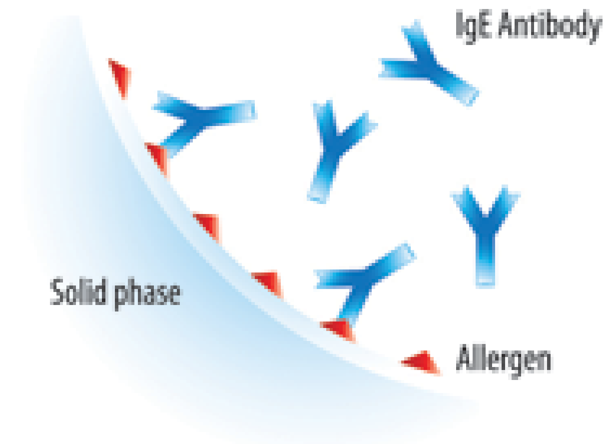
Olive pollen vs grass pollen

Allergic to one, allergic to both?



sIgE against allergenic source is not sufficient. It gives no additional information to SPT

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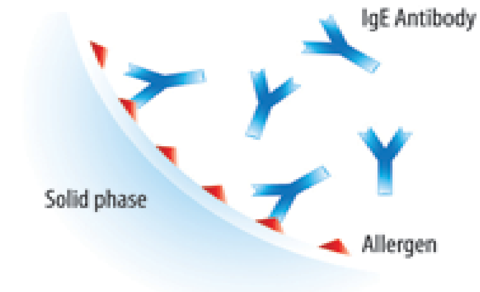
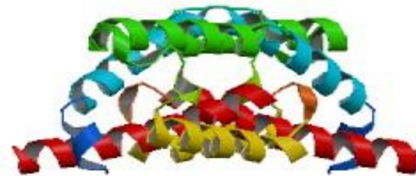
Olive pollen vs grass pollen

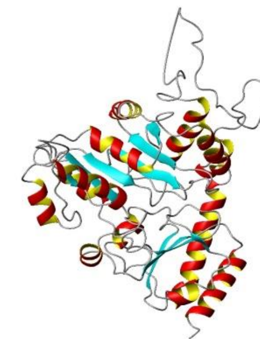
Allergic to one, allergic to both?

Phl p 1





Phl p 5



Ole e 1

Molecular diagnosis is useful to identify the genuine sensitizer and then……

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Choose the best treatment

By selecting the best vaccine according to the molecular diagnosis

Should we recommend mixtures of different allergens in the same vaccine?

1. *We can include up to two or three allergens in one vaccine if their relevance is clearly identify.*

Olive polen vs grass polen

Should we recommend mixtures of different allergens in the same vaccine?

1. *We can include up to two or three allergens in one vaccine if their relevance is clearly identify.*
2. *If mixtures of several allergenic sources are used in immunotherapy, we should ensure a effective concentration of each one in the final composition.*

Olive polen vs grass polen

Should we recommend mixtures of different allergens in the same vaccine?

1. *We can include up to two or three allergens in one vaccine if their relevance is clearly identify.*
2. *If mixtures of several allergenic sources are used in immunotherapy, we should ensure a effective concentration of each one in the final composition.*
3. *Dose-response studies conducted with one allergenic source cannot be extrapolated to those of mixtures.*

And, what happens with other pollen?
How do Spanish allergists deal with other pollen sensitization?

How are these patients?

Difficult to establish a seasonal profile because of different allergen exposures (varies from place to place)

Allergists should be aware of local variations of pollen exposure to help their patients

- *Allergen exposure*
- *Molecular diagnosis*
- *Quantification of pollen in the air*

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What kind of tests are useful?

A deep knowledge of clinical data and exposure is esential

Molecular diagnosis is insufficient because some molecules are not commercially available

Skin prick test with PROFILIN could be of help

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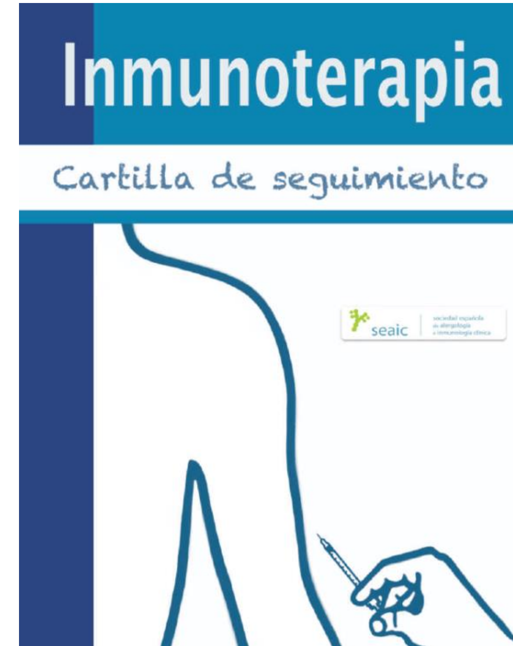
But there are some confusion factors

- *Seasonal exposure can vary*
- *Cross-reactivity*
- *Interference of other allergens*

Choose the best treatment



By selecting the best vaccine: 1, 2, 3…..

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Other pollen

We can choose more than one vaccine but….

Too expensive?

When prescribing AIT with a mixture of several allergenic soruces, only those pollens with significant exposure should be considered.

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