L03 - Immunomodulating agents
4CPS-136

ANALYSIS OF THE USE OF OMALIZUMAB IN ORAL TOLERANCE INDUCTION FOR FOOD ALLERGIES IN CHILDREN

Larrosa-Garcia M[1], Garriga Baraut T[2] , Blasco Velero C[2], Cañete Ramírez C[1], Vilá Indurain BR[2], Garcia Palop B[1], Clemente Bautista S[1], Jiménez-Lozano I[1].
[1] Pharm D in Pharmacy Department. [2] MD in Pediatric Allergology. Vall d'Hebron Maternity and Children's Hospital, Barcelona, Spain.

OBJECTIVES

Oral-induced tolerance (OIT) consists in the administration of an antigen through the oral route in order to suppress immune response against it. It has been proven to be effective in pediatric population, but it can be dangerous for children with high-risk food allergies (hrFA).

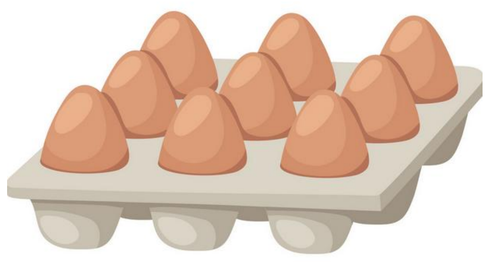
Omalizumab-assisted OIT (oaOIT) has been proved to reduce the number of adverse events and shorten the time needed to reach tolerance compared to conventional OIT in patients with high-risk food allergy (hrFA). However, there are not established recommendations for omalizumab use for this indication.

The objective of this study is to describe the experience of oaOIT in patients with hrFA and its economic impact.

MATERIALS AND METHODS

• Design: **Observational retrospective study**
• Population: all **pediatric patients with hrFA who underwent oaOIT** in a tertiary care hospital. Patients initiated oaOIT in any of these cases:
1. previous conventional OIT failure
2. anaphylaxis after accidental allergen intake
3. specific IgE>100UI/mL

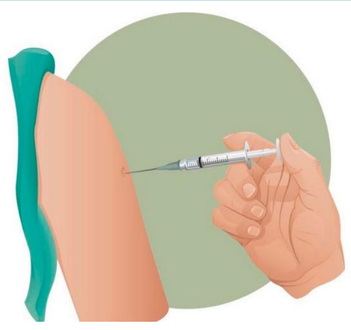
• Data collection: demographic data, dosage, duration of treatment and clinical outcomes were obtained from the prescription and clinical data software.



RESULTS

Patients characteristics

- **16 patients** (8 girls and 8 boys).
- Median age **13.5 years old** (range 8-18).
- Allergies:
  - 12 were allergic to **milk**
  - 4 were allergic to **eggs**
- Median basal IgE was 1,142 (255-3,960) KUI/mL.
- 69% of patients had a specific IgE>100UI/mL.



Anaphylaxis occurred in 3 patients during OTI. Omalizumab injection was well tolerated
(1case of headache and 1case of rash were reported)

Omalizumab-assisted oral induced tolerance

- Subcutaneous omalizumab was started at least **16 weeks before** OIT was initiated.
- Omalizumab dose was **556±366 mg per month** (mean±SD), ranging from 75mg to 1,200 mg.
- Dosage recommendations for omalizumab in allergic asthma included in Summary of Product Characteristics were followed in 8 patients, 6 patients received lower doses and 1 patient received high doses (there were not specific recommendations for one patient).
- **All patients successfully completed OIT**, and omalizumab was then tapered to the minimum tolerated dose.
  - 2 patients were able to stop omalizumab after 44.7 and 61 months, respectively
  - 14 patients are still on omalizumab maintenance, and dose was reduced in 12 (75%) patients.
- **Median monthly cost was 1,100 (738-2,952) €/patient,** taking into account the initial dose.

CONCLUSIONS

✓ **oaOTI allowed patients with hrFA to acquire tolerance in a rapidly and safely manner; however, it had a great economic impact.**
✓ **Further research is needed to define how to reduce or interrupt omalizumab treatment in patients receiving the drug as an adjuvant to OIT.**

http://www.eahp.eu/24-4CPS-136