

Allergic diseases

Importance & prevalence

Saba Arshi M.D

Professor of Allergy & Clinical Immunology

Allergy & Clinical Immunology Department

Hazrate Rasoul Akram hospital

Iran medical science university

Allergic inflammation is due to complex interplay between:

- Several inflammatory cells, mediators and Several key target cells
- Sensory nerves
- Endogenous anti-inflammatory mechanisms

Susceptibility to, and severity of allergic diseases have:

- Genetic basis
- Multiple genes + Environment
- Epigenetic process

ATOPIC MARCH



Prevalence of sensitization

- Prevalence of a positive response to any of the four common allergens ranged from 16.2% to 44% with a median prevalence of 33.1%
- High prevalence rates were in US, UK, Australia
- Low prevalence rates were in Spain, Italy, Iceland

Prevalence of Allergic Rhinitis has increased

In a prospective sub-study following 2018, German Children from age 3 to 11 years until age 15 to 18 years incidence of Allergic Rhinitis increased from an initial rate of 7% to 14%.



Prevalence of Allergic Rhinitis has increased

In a study of 467 children assessed at age 3 years and again at 13 years, the 12 month prevalence rose from 6% to 24% in Children without a family history of allergy, and from 13% to 44% in those with one allergic parent.

Throughout the world, prevalence of Allergic Rhinitis has slightly escalated

- Currently approximately 10 to 30% of adults and 40% of children are affected
- ECRHS recorded a prevalence of 10 to 41% in adults with allergic rhinitis

Asthma and Rhinitis

- Approximately 40% of patients with Allergic Rhinitis have Asthma.
- More than 94% of patients with Asthma suffer with persistent nasal symptoms.

Asthma

Approximately 334 million people worldwide have

Asthma



Childhood Asthma

The third phase of the ISAAC study report finding for about **800,000**, 13 to 14 year old children (97 county) and about **390,000**, 6 to 7 year old children (61 country):

The prevalence of asthma symptoms was an approximately **20 fold**



Prevalence of adult Asthma (ECRHS)

- More than 11% in Australia, New Zealand, US, UK, Ireland
- Less than 4% in Iceland, Germany, Italy and India

WHO survey interviewed (180,000 adult) 18~45
years of age:

Prevalence of diagnosed asthma ranged from 0.2%
in China to 21% in Australia



Eczema

ISAAC (3): Prevalence for 6~7 year old children was
0.9% in India to 22.5% in Ecuador



The worldwide Prevalence of Eczema in children 6 to 7 years of age

Has **increased** in most regions of the **world**, but has remained **stable** in **Western, Northern** and **Eastern Europe**.

Food Allergy

The estimated prevalence of food allergy among children is 4% to 8% in US, and more than 10% among 1 year old children in Australia



Urticaria

- One in five (1/5) persons will experience an episode of urticaria in their life time
- Chronic urticaria affects 1% of the general population



Allergic Conjunctivitis (ISAAC):

- 35% of families interviewed experience allergies
- 50% reported associated eye symptoms
- Up to 20% of population have allergic conjunctivitis



HIV

Investigator have postulated on:

- Increased incidence of Atopy in HIV~infected patients
- Drug hypersensitivity is common in them
- Allergic Rhinitis and sinusitis are common
- Increase rates of wheezing and bronchial hyper responsiveness

Contact Dermatitis

A recent cross-sectional study, patch testing of 3119 Europeans aged 18 to 74 year old reported that 27% had at least one contact allergy (35.5% in women)



