The Impact Of Allergy On Child Health

Dr. Elizabeth W. Kiragu
Paediatric Allergy Specialist
24th April 2018
KPA
The allergy conundrum

- Global prevalence – 20-30% WAO

- Change in trend?

- Is the trend the same in different regions?

- Have the allergies remained the same?

- Who is most affected?
The Spread of respiratory allergies based on SES and westernisation level. Micardi et al 2002
Spectrum of allergies in children

Atopic Eczema

- Hymenoptera stings
- Drug hypersensitivity reactions

Food Allergy

- Urticaria / angioedema

Asthma

- Allergic rhinitis & conjunctivitis
Atopic March

- Rhinitis
- Asthma
- Eczema
- Food allergy

Incidence vs. Age (years)
State of physical, social & mental wellbeing and not merely the absence of physical disease or infirmity
The Itchy
Atopic Eczema & Child Health

- Gateway into development of other allergies

- Physical complications - constant itch, xerosis, lichenification, acute exudative plaques, fissures,

- Infections with bacteria, viruses & fungi

- Erythroderma – potentially fatal complication
Atopic Eczema 2

- Children with eczema had significantly lower z scores at age 2 years 5.1% (95% CI 28.9, 21.2%) (0.010 compared to children without eczema Laitinen et al BJN 2005)

  - Sustained inflammation increases metabolic requirement
  - Poor feeding
  - Inappropriate dietary avoidance practices

- Mental & social stress associated with physical symptoms, lack of sleep, poor self esteem due to one's appearance, poor social integration
PEOPLE ARE AFRAID TO CUDDLE ME BECAUSE THEY THINK MY ECZEMA IS CONTAGIOUS!!
The Yucky
Food Allergy

- 1/3 of children with moderate-severe AD develop FA

- Systematic review in US found children with FA are more likely to be malnourished compared to children with FA

- Multiple allergens are associated with stunting compared to single allergen in 3 studies

- Inadequate nutritional monitoring associated with Vit D and Ca deficiency in one study
Reasons for malnutrition

Perception of food allergy
- Unnecessary avoidance
- Usually unsupervised
- 50% of children with Kwashiorkor in a US study were due to unsupervised avoidance of suspected food allergens
- 2/11 of children with FTT confirmed food allergic.

Growth & nutritional concerns in children with food allergy.
Reasons for malnutrition 2

- Food allergic child
  - Unsupervised dietary avoidance
  - Feeding dysfunction
  - Increased GI losses
  - Underlying chronic inflammation
  - Parental reluctance to introduce new foods & advance diet
  - Financial burden of providing safe alternative diet
Food allergy

- FA is the most common cause of anaphylaxis in children
  - Nuts, shell fish & Milk
  - Highest rates of hospital admissions age 0-4 years
  - Case fatality rates < 1%
- Food protein induced Enterocolitis (FPIES)
  - Dramatic vomiting & diarrhea post exposure
  - Can lead to shock
- Mental & Social implications of FA
  - Fear of reactions
  - Stress of avoiding allergens
  - Ability to participate in normal childhood activities
  - Potential for bullying
The Wheezy
Asthma & Child Health

• Most common chronic lung disease & cause of childhood disability worldwide

• Mortality

  • Death from life threatening asthma

  • Uncontrolled asthma is a risk factor for fatal anaphylaxis
Asthma & Child Health 2

• Stunting due to frequent OCS & high dose ICS

• Poor school performance due to missing school, poor sleep due to uncontrolled symptoms

• Social alienation – inability to join sports, trips, embarrassed to use meds at school
The Sneezy
Allergic Rhinoconjunctivitis

- Burden of physical symptoms
- Decreased night time sleep
- Risk factor for sleep disordered breathing
- Increased day time fatigue with poor performance in school
- School absenteeism
- Associated with poor asthma control
- Decreased visual acuity
Summary

- Different allergic conditions may occur in the same individual – Atopic child

- Allergic conditions are chronic in nature and cause great morbidity both physically, mentally and socially

- Holistic approach is key in management of allergies in children
The Happy