FOOD ALLERGIES: CAN IGNORANCE BE BLISS?

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OUR PATIENT

12 mo old male presents to allergy clinic for evaluation of milk product allergy

• At 9 mo old - severe eczema noted to have improved when mother switched him to soy formula from regular newborn formula

• PCP performs “common allergy blood panel”

• Diagnosed with cow’s milk allergy and peanut allergy

• Mother has been avoiding intake of all nuts since this testing was performed
WHAT ISSUES DOES THIS RAISE?

• What does his prior allergy testing tell us?

• What benefits and limitations has he been subjected to as a result of this testing? Are these limitations a true reflection of his results? How could this have been prevented?

• Should he have been tested in the first place?
CONTENT OBJECTIVES

• Identify children who should receive testing for food allergies

• Cultivate an awareness of the risks and benefits of testing for food allergies in pediatric patients

• Increase provider confidence in effectively educating patient families regarding food allergies and testing thereof
EPIDEMIOLOGY

(Fleischer 2015, Sicherer 2018, Du Toit 2015, Sampson 2001)
EPIDEMIOLOGY

(Bird 2015, Du Toit 2015, Sicherer 2018)
Children at Risk for Food Allergies

• History of anaphylaxis

• History of allergic symptoms within minutes-hours of ingesting food

• Moderate-severe atopic dermatitis (40%)
  • Severity and likelihood of disease seen to correlate with severity of atopic dermatitis (Silverberg 2014)

• Food-induced wheezing in 6% of asthmatics

• Allergy to another food ie eggs for peanuts (Bird 2015, Sampson 2001, Watson 2019)
OUR PATIENT

• History of severe eczema
### Testing

**Skin prick test**

- + Ok for infants
- + Most common by allergists
- - Low sensitivity (20-60%) and specificity (30-90%) for food allergens
- - Results represent sensitization, not true allergy

**Serum IgE**

- + Better in patients with skin disease
- + Can be used for trending
- - Less sensitive than skin prick testing
- - Again represents sensitization, not true allergy

**Oral challenge**

- + Gold standard for testing
- + Exposure levels well-quantified in literature
- - Safety considerations in high-risk children

(Images: Creative Commons)

(Wong 2019)
Results: So what?

- The **level** truly matters
  - Higher probability of sensitization for higher level – see Sampson J Allergy Clin Immunol 2001
- The **specific allergen** is important
Our patient

Should he receive further allergy testing? If so, what kind?

Milk IgE 45.9 kU/L

Negative < 0.35 kU/L
Risks and Benefits of Testing

**Risks**
- Positive predictive value of IgE can be poor; reliability can be test-specific
- Loss of tolerance may lead to allergy development
- Overdiagnosis
- Failure to thrive if over-caution

**Benefits**
- Avoidance of severe reaction
- Confirmatory documentation of disease
- Possible negation of disease

(Bird 2015, Togias 2017, Fleischer 2015)
Our patient’s final update

• Performed baked milk challenge – tolerated well!

• Plans to continue baked milk muffins at designated frequency for several weeks before slowly attempting to introduce milk in different, more concentrated forms

• Will manage food re-introduction with help of pediatric allergist, sending reports to PCP
APPLICABLE CHANGES FOR PRACTICE

• Consider food allergy testing in patients at risk
• If testing, be specific
• If testing in primary care clinic positive, consider referral to allergy specialist
• Consider taking time to thoroughly educate families about the results of their child’s allergy testing and their implications
Works Cited


QUESTIONS?