Is Home Challenge An Option in Food Protein-Induced Enterocolitis Syndrome?

Kristiina Frechette,1,2 Vaidehi Bhatt,2 Maya Al Mardini,1,2 Tarin T. Moni,1,2 Wardha Wardha,2 Vince Wu,2 and Jason A. Ohayon MD FRCPC1,2

1McMaster University, Hamilton, Ontario, Canada, 2Hamilton Allergy, Hamilton, Ontario, Canada

Rationale

- Food protein-induced enterocolitis syndrome (FPIES) resolution and challenge times remain debated
- Characterization of FPIES’ natural history helpful in guiding recommendation on timing and optimal allergen reintroduction
- In-office oral challenges used assess allergen resolution following published protocols:
  - 0.06-0.6 g (usually 0.3 g of food protein/kg body weight) with observation for 4-6 hours

Methods

- Follow-up survey conducted via email and phone to collect information on pediatric FPIES
- Patients initially seen at a Southwestern Ontario Allergy clinic from June 2016 to June 2019

Results

- Identified 60 FPIES patients ages 2-5 yrs over 5yr period
- 38/60 (63%) responses, majority single-food FPIES trigger (26, 68%)
- Most common FPIES triggers:
  - Hens Egg (13, 34%), average age, 9.5 mo
  - Cows milk (8, 21%), average age, 6.6 mo
  - Rice (8, 21%), average age, 7.6 mo
- 23/38 (61%) had reintroduced FPIES triggers
  - 16/23 (70%) outside of a clinical setting;
  - remaining 7/23 (30%) in-MD office challenge
- 2 re-introduction reactions: 1 in-office, 1 at home
- FPIES spontaneous resolution in 21 patients (55%)
- Average age of resolution:
  - Egg at 2.5 yrs, Cow’s milk at 2yrs, Rice at 3.6yr
- More of those who resolved in-office tended to have FPIES to a single trigger (6/6 patients) compared to those with at-home resolutions (4/8 patients)

Conclusions

- FPIES to single food trigger is most common
- Average resolution age of resolution varies: earliest to cow’s milk; latest to rice by mid-toddlerhood
- Most food reintroductions occurred safely at home from 2 years on, avoiding need for supervised MD challenges


Figure 1: Reintroductions of triggers for FPIES cohort.

Figure 2: Resolution trends amongst cohort of FPIES patients

Figure 3: Resolution time after diagnosis per reintroduction location