Linear growth in Children with COW Milk allergy and their response to hypoallergenic diet; Significant Catch-up in the first 6 months.

S Elsiddig, M Shaat, M Itani, C Jour, F Souieky, N Al-Naimi, M Ehlayel, A Soliman
Hamad General Hospital, Doha, Qatar
Pediatric Department, Dietary and Nutrition Department

Introduction

Milk allergy is an adverse immune reaction to proteins in cow's milk. Treatment consists of eliminating milk from the diet. Controversy exists about the effect of CMA and the use of hypoallergenic formula on linear growth in these children.

OBJECTIVES:
Evaluate the growth status of children with CMA at their first presentation and after 6 months of hypoallergenic formula.

Methodology

- Observational, longitudinal, retrospective study
- Infants and children diagnosed with CMA had high IgE level at diagnosis between June 2016 - December 2017.
- The following data were analyzed:
  - Chronology and type of feeding
  - Presence of other food allergens, atopic dermatitis or other symptoms of allergy
  - Duration of CMA
  - Anthropometric data at diagnosis & after 6 months from hypoallergenic formula, expressed as Z-scores.

Results

- A total of 20 children aged between 2 months to 5.9 years (mean age = 1.34 ± 1.9 years).
- Presentation anthropometric data:
  - BMI SDS = -0.12 ± 1.3 (only 3 had BMI SDS < -1.5).
  - Ht SDS = -0.68 ± 1.057, with 4/20 children with HTSDS < -2.
- Anthropometry 6 months post hypo-allergenic formulae:
  - BMI SDS = -0.196 ± 1.1 and only 1/20 children had BMI SDS < -1.5.
  - This child had a significant catch up in HSDS from -1.6 to -1.1 which explained the same BMI SDS despite gaining weight properly
  - HtSDS = -0.497 ± 0.97 only 1/20 had HtSDS < -2
  - This child had significant multiple food allergies with low weight gain (4.4 g/day during the treatment period).

Conclusion

- Our study showed that 20% of children with CMA had short stature and 15% had low weight for height at presentation.
- Improvement of linear growth and weight gain was observed in these patients when put on hypo-allergenic formula.
- Children with normal anthropometric data at presentation, continued to grow normally on a hypoallergenic diet.
- The presence of other food allergies might affect weight gain and linear growth in some children.

Ashraf Soliman MD PhD FRCPP, Department of Pediatric, Hamad General Hospital, Doha, Qatar, Atsoliman@yahoo.com