

Clinical Case

Pre School with IgE mediated CMA: Diet Needs Supplementation?

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CLINICAL CASE

Male patient, 3 years and months, with allergy to cow's milk protein and soy (IgE mediated) and deceleration of weight gain.

Weight and height: 14 kg and 101 cm. The child is eutrophic, but has a weight loss, with a gain of only 300 g in the last 6 months.

Z score - W/A = -0,65 / H/A = 0,46 / IMC/A = -1,51 (Figure 1).

Physical examination

Good general condition, with no signs of atopy on physical examination. He reported accidental ingestion of a cake containing cow's milk protein for two months, followed by a hives twenty minutes after ingestion, medicated with antihistamine. No other

leaks, complications and symptoms since the last visit.

Intestinal habit

Hardened and effortless bowel movements, in small amounts, daily frequency. Denies pain, discomfort, bleeding, retention behavior and incontinence. There are no signs of impaction.

Food

Following a diet free from cow's milk since seven months and soy free from nine months. Eat cereals, beans, meat and eggs in adequate amounts. Refuses vegetables, fruits and vegetables, with the exception of tomatoes and apples. It prefers "powdered" juices and "sweetened" box juices, drinking only 100 ml of water per day.

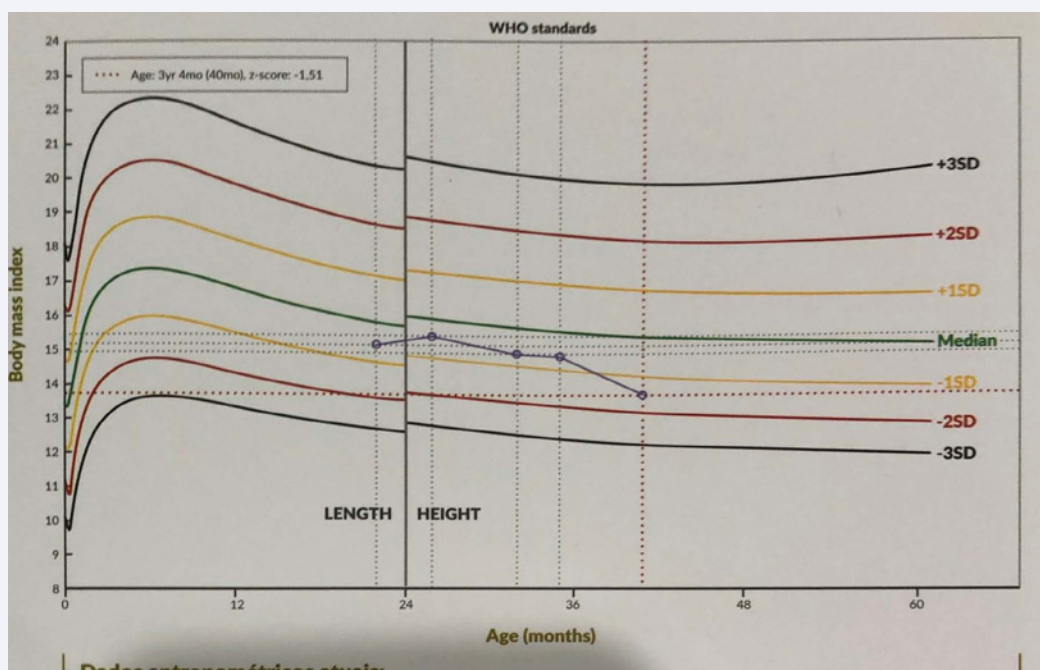


Figure 1 Male patient, 3 years and months, with allergy to cow's milk protein and soy (IgE mediated) and deceleration of weight gain.

The evaluation of dietary intake indicates an intake of 816 kcal, 20 g of protein, 6 g of fiber, 36 mg of calcium, 2.8 mg of iron and 0.1 mcg of vitamin D per day. These and other nutrients do not meet the age recommendations (see table above).

Breakfast

150 ml of sweetened pineapple juice (industrialized).

Snack (school)

A small unpeeled apple.

Lunch

Tomato salad; 3 tablespoons of rice and one of beans; a small piece of roasted meat and ½ glass of lemon juice (reconstituted powder).

Snack (afternoon)

150 ml of sweetened cashew juice (industrialized) and a small portion of starch biscuit.

Dinner

Tomato salad; a noodle skimmer around suck and a piece of grilled chicken fillet, with 1/2 glass of reconstituted powdered juice, orange flavor.

Supper

Tea with sugar and two cream cracker with a teaspoon, filled with jam.

Pure water

100 ml / day.

CONDUCT

Goals

- correct eating errors
- provide a diet with an adequate amount of energy and nutrients suitable for the age
- improve bowel habit
- return to the historical growth channel (between Z -1 score and 0 BMI / age) within six months

Recommendations

- Introduce one to 2 new vegetables and fruits per week and stimulate the consumption of whole foods. Explain to the family that it is normal for children to not readily accept new foods. For this behavior to change, it is necessary for the child to taste the new food eight or more times, even if it is in a minimal amount. The variation in the form of preparation can contribute to better acceptance.
- When possible to consume fresh fruits instead of juices. Exchange industrialized juices for natural, pulp or concentrates (reconstituted). reducing the addition of sugar.
- Supplement the diet with Neoforte (Nutricia). Start with 3 to 4 measuring spoons a day and increase according to the child's acceptance until reaching 10 measuring

spoons. Emphasize to the family the importance of supplementation and clarify that Neoforte is totally allergen free, safe from the allergy point of view and will complement energy, protein, vitamins, minerals (especially calcium) and other nutrients that are deficient in the child's diet.

- increase the intake of pure water, until reaching 500 ml / day
- offer food in small portions, as large portions can make the child feel discouraged from eating. The intervals must be sufficient for the child to feel hungry at the next meal (minimum of 2 to 3 hours).
- Adults should be good examples, that is, eating at the table with ease and having a varied and healthy diet.

Return

- evaluate response to the guidelines and make adjustments;
- Increment the number of servings of vegetables (target: 3 servings / day) and fruit (target: 3 servings a day of fresh fruit and 1 serving of juice):
- reduce Neoforte to 8 measured spoons per day, according to response to weight gain and acceptance of new foods;
- evaluate the need to increase water intake, to introduce fiber supplements and / or laxative medication;
- Evaluate the need to establish new strategies to increase food intake.

DISCUSSION

This case illustrates common conditions in the pediatrician's office: refusal of vegetables and fruits, low water intake, high consumption of industrialized juices and "powder", with food intake aggravated by restrictions imposed by food allergy. Breast milk or, in its absence, milk substitute formulas, are very important foods in childhood, being responsible for the supply of approximately 40% of energy in the second half of life and 25% in the preschool phase. The withdrawal of milk impacts not only the caloric and calcium intake, but also protein, fats, vitamins A, D, B6 and B12, pantothenic acid, riboflavin, magnesium and phosphate [1,2]. In 2004 Medeiros and collaborators [3], showed that children on a cow's milk exclusion diet consumed less energy and calcium than controls and nutrient recommendations. Low calcium intake was also observed in a portion of children who took calcium supplements and hypoallergenic formulas. Other authors have also found impaired nutritional status and energy, protein, fat, calcium, iron, zinc, selenium, niacin, riboflavin and vitamins D, A, C and E intake associated or not with nutritional repercussion [4,5].

Late consequences of allergy to cow's milk and / or the elimination diet have also been pointed out in recent publications, as, among others, unfortunately, this is hardly achieved due to lower stature [6], greater occurrence of eating difficulties [7,8], functional gastrointestinal disorders, fractures and less bone mineral density and content.

Although some alternative lines argue that calcium can be

Table 1: Calculations of the nutritional composition of the menus were performed with the Avanutri PC software - nutritional calculation software.

NUTRIENTS	RECOMMENDATIONS FOR DAILY INGESTION	CURRENT DIET	DIET PROPOSED ONLY IN - FOODS WITHOUT NEOFORTE	DIETA PROPOSED - FOOD + NEOFORT
Caloric value (kcal)*	1250	65%	67%	97%
Proteins (g)**	34,37	59%	68%	106%
Fibers (g)***	10,5	58%	102%	117%
Calcium (mg)#	600	6%	23%	97%
iron (mg)#	6	47%	67%	167%
Vit. D (mcg)#	5	2%	2%	151%
water##	900 ml (água e bebidas)	700 ml (600 ml bebidas + 100 ml água)	900 ml (400 ml bebidas + 500 ml água)	900 ml (400 ml bebidas + 500 ml água)

* recommendation for 3/4-year-old boy with moderate physical activity [14].

** recommendation of 11% of the total energy value - DRI (5-20%) [15].

*** age recommendation - (age + 5 to 10 g - average value 10.5 g) [16] #DRI for children up to 6 years [17].

recommendation for 1300 ml per day - 900 ml as drinks and 400 ml of food [14,15].

supplied through the ingestion of foods such as broccoli, kale, among others, unfortunately this is hardly achieved continuously. In the present case, to reach the calcium needs (600 mg per day), the child would need to eat 1.3 kg of cooked broccoli or 0.8 kg of braised cabbage daily [9]. That is, the withdrawal of milk and dairy products makes it imperative that a specific supplementation be performed.

Excessive consumption of sugary drinks is associated with a higher risk of obesity and chronic diseases in the medium and long term [10]. It is important to guide families to prefer fresh fruits and to increase the intake of pure water in the intervals, so that the child does not feel thirsty during meals. This measure also contributes to an increase in fiber intake.

Neophobia is common in the preschool phase, but it is usually overcome when parents are good examples and lead the food introduction in a quiet but firm way. In children with food allergies, however, additional difficulties may exist [7,8]. Recent publications suggest strategies for the diagnosis and management of children with eating difficulties [11-13].

COMPOSITE MENU TABLE

breakfast - 150 ml Neoforte (4 measuring spoons + 120 ml of water) and 2 cookies whole with 1 teaspoon of margarine

Snack (school) - 1 small apple with peel

Lunch Tomato salad with cucumber

1 tablespoon of beans

3 tablespoons of rice

1 small piece of roasted meat

half a glass of homemade lemonade

Snack (afternoon) - 75 ml of Neoforte (2 measuring spoons powder + 60 ml water) whipped with 1/2 half dwarf banana + 1 small portion of powder

Dinner Tomato salad with American lettuce

1 suga noodle skimmer

1 small piece of chicken fillet grilled

1 chopped orange

Supper 150 ml of Neoforte (4 spoons measure of powder + 120 ml of water) with 1 dessert spoon of oats 2 whole cookies with 1 spoon tea filled with jam

Pure water gradually increase until it reaches 500 ml per day (Table 1).

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