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NUTRICIA LEARNING CENTER

CASE REPORT

Transition to and Acceptance of TYR Anamix® Next

INTRODUCTION

A 13-day old male was referred for management of Tyrosinemia type 1 (HT1) after a positive newborn screen (plasma succinylacetone 7.32 µmol/L). He was born at 39 weeks of gestation from an uncomplicated pregnancy. Baby was on a standard infant formula from birth. He was drinking 60 to 90 mL of his standard infant formula every 3 to 4 hours with an estimated intake of phenylalanine (phe) + tyrosine (tyr) of 887 mg/day (2.4 grams of whole protein/kg, 100 calories/kg).

TYR Anamix Next provides more protein per 100 kcal compared to the infant formula, a multi-fiber mix, as well as a more age-appropriate vitamin and mineral profile.

The baby was successfully fed XPhe, XTyr Analog during the first months of his life along with whole protein from standard infant formula and later on solid foods until 15 months of age, when it was felt the child was ready for a follow-on formula, TYR Anamix Next. TYR Anamix Next provides more protein per 100 kcal compared to the infant formula, a multi-fiber mix, as well as a more age-appropriate vitamin and mineral profile. He was also consuming all whole protein from solid foods and was no longer taking any standard infant formula.

NUTRITIONAL MANAGEMENT AND TRANSITIONTO NEW FORMULA

At this time, the child's nutritional minimum* needs were as follows:

Energy needs	950 kcal/d
Protein need	13 g (DRI + 25%; 1.1 g/kg x 9.455 x 1.25)
phe + tyr prescription	600 mg/d
Whole protein from food	9.6 g
Protein from metabolic formula to meet protein needs	3.4 g (Protein intake from XPhe, XTyr Analog was maximum 13.7g)

*The nutritional needs in table above are minimums; note that protein intakefrom metabolic formula are often higher than nutritional needsfor infants and children.

Height and weight at 15 months of age:

Weight	9.455 kg	15-50th percentile
Height	78.2 cm	15-50th percentile

Composition of TYR Anamix Next

Height	Per 100 g Powder
Energy, kcal	385
Protein Equivalent, g	28
Fat, g	12.5
DHA, mg	180
Carbohydrate, g	43.2
Fiber, g	11.2

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WE INITIATED THE TRANSITION TO TYR ANAMIX NEXT IN A STEP-WISE PROCESS TO FACILITATE ACCEPTANCE OF THE NEW FORMULA.

Steps	Formula	Powder, g	Protein, g	Fiber, g	Total Volume	Caloric Density
1	XPhe, XTyr Analog	127	16.5		700 mL	0.92 kcal/mL
	TYR Anamix Next	10	2.8	1.1	Maximum real intake 500 mL (13.7 g)	
2	XPhe, XTyr Analog	117	15.2		700 mL	0.9 kcal/mL
	TYR Anamix Next	20	5.6	2.2	Maximum real intake 500 mL (14.8 g)	
3	XPhe, XTyr Analog	107	13.9		700 mL	0.89 kcal/mL
	TYR Anamix Next	30	8.4	3.3	Maximum real intake 500 mL (15.9 g)	
4	XPhe, XTyr Analog	97	12.6		700 mL	0.88 kcal/mL
	TYR Anamix Next	40	11.2	4.5	Maximum real intake 500 mL (17.0 g)	
5	XPhe, XTyr Analog	70	9.1		600 mL	0.88 kcal/mL
	TYR Anamix Next	50	14.0	5.6	Maximum real intake 500 mL (19.2 g)	
6	XPhe, XTyr Analog	50	6.5		500 mL	0.94 kcal/mL
	TYR Anamix	60	16.8	6.7		
7	XPhe, XTyr Analog	30	3.9		500 mL	0.83 kcal/mL
	TYR Anamix	70	19.6	7.8		
8	TYR Anamix	80	22.4	9.0	500 mL	0.62 kcal/mL

The child is now on step 5 of transition to TYR Anamix Next. To date, product is well tolerated; parents denied any gassiness or diarrhea with the change. The child continues to develop normally. At 18 ½ months of age, weight and growth velocity are maintained (15-50th percentile for growth and weight). The total protein need was increased to 14 g with a phe + tyr prescription of 650 mg/d. Whole protein from solid food was increased to 10.4 g/d.

RESULTS

The child followed his transition in a step-by-step manner from an infant formula containing no fiber to a follow-on formula containing a multi-fiber mix. At 18 ½ months, the child is thriving and continuing to consume and tolerate TYR Anamix Next + XPhe, XTyr Analog well. Maximum intake of both formulas is 100 g, providing 19.2 g of protein and 5.6 g of fiber. The child also consumes a varied diet consisting of whole foods low in protein and special low protein foods appropriate for tyrosinemia.

This case report* is provided by Manon Bouchard, RD; Hôpital Sainte-Justine, Montréal (Québec), Canada. First published on Nutricia Learning Center in 2017.

* The opinions expressed are those of the author of this case study and not necessarily reflective of the views of Nutricia North America.

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