A SYNBIOTIC-CONTAINING AMINO-ACID-BASED FORMULA IMPROVES GUT MICROBIOTA IN NON-IgE-MEDIATED ALLERGIC INFANTS

Candy D *et al.* Pediatr Res. 2018;83(3):677-86.

BACKGROUND

Prebiotics and probiotics (synbiotics) can modify gut microbiota and have potential in allergy management when combined with amino acid-based formula (AAF) for infants with cows' milk allergy (CMA).

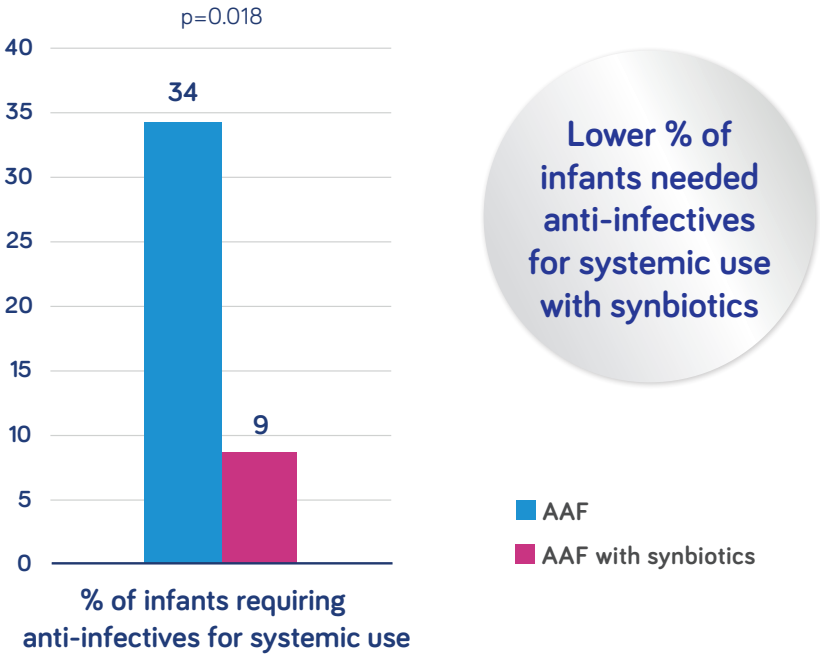
METHODS

This multicenter, double-blind, randomized controlled trial investigated the effects of an AAF-including synbiotic blend on percentages of bifidobacteria and *Eubacterium rectale/Clostridium coccoides* group (ER/CC) in feces from infants with suspected non-IgE-mediated CMA. Feces from age-matched healthy breastfed infants were used as reference (healthy breastfed reference (HBR)) for primary outcomes. The CMA subjects were randomized and received test or control formula for 8 weeks. Test formula was a hypoallergenic, nutritionally complete AAF including a prebiotics blend of fructooligosaccharides and the probiotic strain *Bifidobacterium breve* M-16V. Control formula was AAF without synbiotics.

RESULTS

A total of 35 (test) and 36 (control) subjects were randomized; HBR included 51 infants. At week 8, the median percentage of bifidobacteria was higher in the test group than in the control group (35.4% vs. 9.7%, respectively; p<0.001), whereas ER/CC was lower (9.5% vs. 24.2%, respectively; p<0.001). HBR levels of bifidobacteria and ER/CC were 55% and 6.5%, respectively.

ADVERSE EVENTS AND MEDICATION USAGE†



†Exploratory findings do not intend to offer final and conclusive results. Further research is needed to confirm the findings.

CONCLUSIONS

AAF including specific synbiotics, which results in levels of bifidobacteria and ER/CC approximating levels in the HBR group, improves the fecal microbiota of infants with suspected non-IgE-mediated CMA. Furthermore, analysis of medication usage showed that a significantly lower percentage of infants in the test group needed anti-infectives for systemic use.