

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).

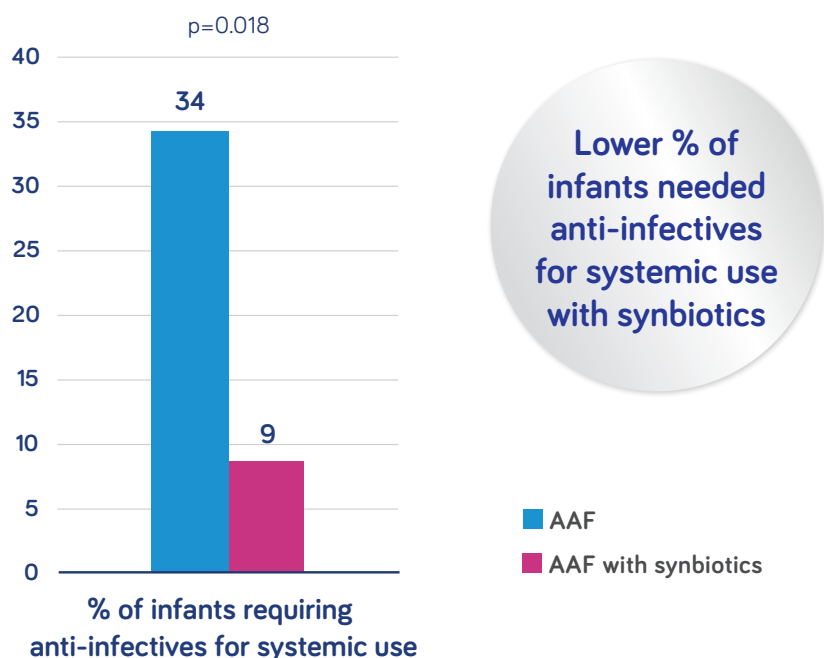
METHODS

This multicenter, double-blind, randomized controlled trial investigated the effects of an AAF-including synbiotic blend on percentages of bifidobacteria and *Eubacterium rectale/Clostridium coccooides* 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[†]



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.