

Ruiz-Palacios, G., Guerrero, M.L., Hilty, M., Dohnalek, M., Newton, P., Calva, J. J., Costigan, T., Tuz, F., & Arteaga, F., (1996). Feeding of a probiotic for the prevention of community-acquired diarrhea in young Mexican children. Pediatrics Research, 39 (Part 2): 104, Abst. #1089.

Abstract

Introduction. Diarrheal diseases remain as one of the most common health problems during childhood worldwide. It has been demonstrated that intake of fermented milk products containing *Lactobacillus spp.* is effective in the treatment of acute diarrhea and rotavirus associated diarrhea. Yet, no data are available to define their role in diarrhea prevention. Aim. To evaluate the effect of a probiotic mixture containing viable *Lactobacillus reuteri* fed to children in the prevention of diarrhea. Methods. A blinded, controlled, community based clinical study was conducted to evaluate the incidence and severity of diarrhea in children 12 to 36 months of age living in Mexico City. After randomization, 120 children received the control study feeding and 123 the probiotic-containing beverage for 14 weeks. Diarrhea surveillance was done by weekly visits and a 24-hr paging system was used. Intake, tolerance, stool pattern and fecal counts of *Lactobacillus spp* and *L. reuteri* were monitored. Stool samples from diarrheal episodes were tested for common pathogens including rotavirus. Outcome was assessed eight days after initiation of study feeding. Results. Study groups were comparable by age and sex; no differences were seen in mean daily intake. Four children in the probiotic group were excluded due to protocol transgressions. A higher proportion of children fed probiotic were free of diarrhea (90/119) than for those in the control group (77/120); $p=.04$). Diarrhea incidence was significantly lower in the probiotic group (0.27 vs 0.42 episodes/child, $RR=0.59$; 95% CI .36-.97, $p=.03$). No significant differences were found between groups in diarrhea severity. For rotavirus diarrhea, 7 cases occurred among controls and only 2 cases among the probiotic group. Conclusion. Consumption of a beverage containing *Lactobacillus spp.* and *L. reuteri* can reduce the risk of diarrhea in young children when consumed as part of the daily diet. Supported by Ross Products Division, Abbott Laboratories.