Abstract

Objective: The effectiveness of influenza vaccination in preventing illness is lower in the elderly; this is why the ability of Lactobacillus plantarum CECT 7315/7316 to stimulate the response to influenza vaccination in elderly was evaluated. Research methods and procedures: A randomized, double-blind, placebo-controlled human trial including 60 institutionalized volunteers aged 65-85 years was performed. All the volunteers were vaccinated with a trivalent influenza vaccine (A/Wisconsin/67/2005 NYMC X-161B (H3N2), A/Solomon Islands/3/2006 (H1N1) and B/Malaysia/2506/2004) for the Spanish vaccine campaign 2006/2007. The consumption of the probiotic began between three and four months after the vaccination. Volunteers were randomly assigned to one of three following groups: group A (receiving 5\times10^9 cfu/day of L. plantarum CECT 7315/7316 in 20 g powdered skim milk), group B (receiving 5\times10^8 cfu/day of L. plantarum CECT 7315/7316 in 20 g powdered skim milk) and group C or placebo (20 g powdered skim milk). The participants consumed the probiotic during 3 months. Results: The consumption of L. plantarum CECT 7315/7316 during 3 months after influenza vaccination increased the levels of influenza-specific IgA and IgG antibodies. Moreover, a trend towards an increase in influenza-specific IgM antibodies was also observed. Conclusion: L. plantarum CECT7315/7316 has an immunostimulating effect and could be used to improve the response to influenza vaccination in elderly.

Keywords

Lactobacillus plantarum CECT 7315/7316.