Abstract

Background: Constipation is an intestinal dysfunction. Prebiotics, such as inulin, can improve bowel function by positively influencing intestinal biota. Aim: To analyze the scientific evidence for the role of inulin in improving bowel function in patients with chronic constipation. Methods: A meta-analysis of randomized controlled clinical trials was conducted, grounded on a literature search for the period 1995-2013 (descriptors: inulin & constipation) on PubMed, ScieLo and Central Trials Register Cochrane databases. A total of 24 articles were found, 5 of them were selected for this meta-analysis, involving 252 subjects (experimental group: n = 144, control group: n = 108). The quality of the studies was assessed using the Jadad scale. Results: We found a significant overall effect of inulin on stool frequency (DEM = 0.69, 95%CI: 0.04, 1.34), stool consistency (Bristol scale) (DEM = 1.07, 95% CI: 0.70, 1.45), transit time (DEM = -0.57, 95% CI: -0.99, -0.15) and hardness of stool (RR = 0.42, 95% CI: 0.26, 0.70). Pain and bloating do not improve with inulin intake. Conclusions: inulin intake has a positive effect on bowel function.

Keywords

Inulin, Constipation, Bowel function, Randomized controlled clinical trial, Meta-analysis.