Probiotic treatment of vancomycin-resistant enterococci: a randomised controlled trial.

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OBJECTIVE: To determine whether eating Lactobacillus rhamnosus GG (LGG) in the form of commercially available yoghurt improves clearance of vancomycin-resistant enterococci (VRE). DESIGN: Double-blind, randomised, placebo-controlled trial. SETTING: Renal ward of Austin Health, a tertiary hospital, Feb-Oct 2005. PARTICIPANTS: 27 VRE-positive patients, 14 receiving active treatment and 13 controls. INTERVENTIONS: Subjects were randomly assigned to either a treatment group (receiving 100 g daily of yoghurt containing LGG for 4 weeks) or a control group (receiving standard pasteurised yoghurt). Faecal samples were obtained three times at about weekly intervals. Treated patients were tested for VRE again at 8 weeks. Patients in the control group who had failed to clear VRE after 4 weeks were then given LGG-containing yoghurt for 4 weeks, as an open continuation. MAIN OUTCOME MEASURE: Number of faecal specimens clear of VRE. RESULTS: Of the 27 patients enrolled, 23 completed the study. Two patients were lost to follow-up, one died and one withdrew. All 11 patients in the treatment group who completed the study cleared VRE. Three subjects reverted to VRE positivity after using antibiotics to which LGG is sensitive, while all others remained negative for at least 4 weeks after trial completion. Twelve control subjects completed the study, of whom one cleared VRE and 11 remained VRE-positive. Eight of these 11 patients were subsequently crossed over to receive LGG yoghurt, and all cleared VRE within 4 weeks. CONCLUSION: To our knowledge, this is the first description of a probiotic therapy to successfully treat gastrointestinal carriage of VRE in renal patients. Further investigation of the use of LGG in VRE-positive patients is warranted.

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