A Study to Assess the Effect of Dietary Supplementation with Soluble Fibre (Minolest®) on Lipid Levels in Normal Subjects with Hypercholesterolaemia

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Abstract

Hypercholesterolaemia is one of the major risk factors in the development of coronary artery disease. In recent years, many non-prescription treatments have become available for cholesterol lowering. Minolest® is a product that contains guar gum and psyllium as the principal active ingredients. We conducted a randomised, placebo-controlled, double-blind, parallel-group study to assess the efficacy of Minolest® as a lipid-lowering agent. Secondary aims included assessment of the effect on blood pressure and obesity. We also looked at the acceptability of the product and side effects associated with its ingestion. After a 4-week run-in period, 83 subjects were randomised to receive placebo or Minolest® (16.5g/day) for 3 months. Seven subjects defaulted follow up, 5 in the placebo group and 2 in the active treatment group. In addition, 9 subjects (5 on active treatment and 4 on placebo) had total cholesterol fall into the optimal range (<5.2 mmol/l) during the run-in phase and were removed from the study. At baseline in the active treatment group, total cholesterol was 6.1 (5.43 to 8.06) mmol/l, triglyceride 1.54 (0.56 to 4.19) mmol/l, HDL cholesterol 1.32 ± 0.43 mmol/l and LDL cholesterol 4.1 (3.10 to 6.27) mmol/l. In the placebo group, total cholesterol was 5.84 (5.32 to 8.38) mmol/l, triglyceride 1.47 (0.69 to 11.0) mmol/l, HDL cholesterol 1.15 ± 0.33 mmol/l and LDL cholesterol 3.87 (2.46 to 5.14) mmol/l. The differences in the baseline characteristics were not statistically significant except the LDL-cholesterol. Minolest® produced a 3.24% (SD = 7.85%, P = 0.020) decrease in total cholesterol and 5.45% decrease in LDL cholesterol (SD = 10.25%, P = 0.0034) but no significant difference in serum triglyceride, weight, body mass index or blood pressure. This was not seen in the placebo group. The percentage fall in LDL cholesterol increased to 7.16% and 7.37% in subjects who consumed at least 50% and 70% of the treatment respectively. There were few side effects. The authors conclude that this product has a small impact on the lipid profile and may be useful only in subjects with mild hypercholesterolaemia and a low risk of coronary artery disease.

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