

Feeding trial of instant food containing lyophilized yam powder in hypertensive subjects

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Abstract

BACKGROUND: It was reported in a previous paper that the yam tuber storage protein dioscorin exhibited antihypertensive effects on spontaneously hypertensive rats. The aim of the present study was to evaluate and compare the effects of packets of instant food (30 g) with (treated meal) and without (placebo) lyophilised yam powder on hypertensive subjects. **RESULTS:** A placebo-controlled feeding trial was conducted daily for 5 weeks (stage 1), followed by a 1 week washout and then a 5 week crossover (stage 2). Twenty-one subjects finished the trial. One packet of treated meal contained 140 µl 2.54 mg of dioscorin according to enzyme-linked immunosorbent assay. The blood pressure results of the treated meal and placebo groups at stage 1 end versus originals, but not at stage 2 end versus stage 2 beginning, were significantly different by the paired t test. Systolic (SBP) and diastolic (DBP) blood pressure readings after treated meal intervention, but not after placebo intervention, differed significantly from the original values based on one-way analysis of variance followed by the post hoc Tukey test; the reductions in SBP and DBP were 6.52 and 4.76 mmHg respectively. The feeding trial did not appear to affect serum lipid profiles or other biochemical measurements of cardiovascular risk. **CONCLUSION:** Intake of an instant food containing 140 mg of dioscorin over 5 weeks had a regulating effect on human blood pressure. Copyright