

USE OF NICOTINIC ACID AND CLOFIBRATE IN THE MANAGEMENT OF
HYPERLIPOPROTEINAEMIC PATIENTS.

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Single drug therapy for hyperlipoproteinaemia is often inadequate as far as reduction of risk for atherosclerotic vascular disease is concerned. In other areas of therapeutic medicine, combined drug therapy is commonly used so that maximal therapeutic effect, with minimal side effect, can be achieved. In this study, we have assessed the relative effects of nicotinic acid and clofibrate used individually and in combination, in patients with hyperlipoproteinaemia.

Eleven patients with hyperlipoproteinaemia refractory to dietary management were studied. Hypercholesterolaemia alone was present in 3 patients and both hypercholesterolaemia and hypertriglyceridaemia in 8 patients. The patients were given nicotinic acid, clofibrate and the combination of nicotinic acid and clofibrate for a period of 3 months on each regime in a cross over design. Body weight and diet was kept constant throughout the study.

TABLE 1: Effect of three different lipid lowering regimes on fasting plasma lipid levels (mmol/litre).

	BASELINE	CLOFIBRATE	NICOTINIC ACID	CLOFIBRATE & NICOTINIC ACID
Cholesterol	8.1±0.6	7.0±0.5***	6.2±0.5****	5.5±0.8****
Triglycerides	2.8±0.4	1.9±0.2*	1.7±0.3*	1.3±0.2***

FOOTNOTES: 1. Mean ± s.e.m. are shown.
2. n=11.
3. Significance of difference from baseline observation is shown by ns(p>0.05), *(p<0.05), ***(p<0.01), ****(p<0.001). Student's paired t-test.

Significant reductions in plasma cholesterol of 13% on clofibrate alone, 23% on nicotinic acid alone and 35% on the combination were achieved. For fasting plasma triglycerides, significant reductions of 23% on clofibrate alone 32% on nicotinic acid alone and 49% on the combination were achieved. Both cholesterol and triglyceride lowering properties of clofibrate and nicotinic acid were therefore apparently additive.

A significant rise in HDL cholesterol from 1.0±0.2 to 1.5±0.2 mmol/litre was observed with nicotinic acid treatment.

The overnight rebound rise of plasma free fatty acids with the anti-lipolytic agent, nicotinic acid was prevented by co-administration with clofibrate. The effects of the three therapeutic regimes on blood glucose, liver enzymes, serum uric acid and ESR were also evaluated.

The combined nicotinic acid and clofibrate regime achieved a substantially greater reduction in plasma cholesterol and triglyceride concentration compared to the two drugs used alone. Thus greater efficacy was achieved without the adverse side effects associated with the use of nicotinic acid alone, or with reduced severity of side effects.

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