Niacin, Fish Oil Combination Normalizes Lipids

BY MITCHEL L. ZOLER
Philadelphia Bureau

New York — A combination of niacin and omega-3 fatty acids has been found to produce a dramatic drop in triglyceride levels and a large rise in HDL cholesterol levels in a controlled study in 14 patients with arteriosclerotic dyslipidemia.

The combination was also effective in a separate study with seven patients who had type 2 diabetes, William L. Isley, M.D., said at an international symposium on triglycerides and HDL.

Although the combined use of the two over-the-counter (OTC) drugs is not approved by the Food and Drug Administration, both agents are safe and so the combination is worth trying in appropriate patients, said William S. Harris, Ph.D., Dean, School of Medicine at the University of Missouri–Kansas City and a coinvestigator on the study. Neither study received commercial support, he said.

The first study enrolled 14 patients with out-diabetes who had fasting triglyceride levels of 150-500 mg/dL, fast- ing HDL-cholesterol levels lower than 40 mg/dL in men or lower than 50 mg/dL in women, and normal LDL cholesterol levels. None of the participants was on any other lipid-lowering medication. The seven patients were randomized to daily treatment with 1 g of immediate-release niacin t.i.d. and 3.4 g of omega-3 fatty acids. The other seven patients were treated with placebo. In this study, the fish oil formulation used was Ormocan, a semipurified formulation that received FDA approval for prescription sale in the United States late last year.

After 16 weeks of treatment, patients in the active treatment arm had an average drop of 52% in their serum triglyceride levels, a large rise in HDL cholesterol of 33%. In the placebo group, triglyceride levels rose by an average of 10%, and HDL cholesterol levels rose by an average of 4%, said Dr. Isley, an endocrinologist at the Mayo Clinic in Rochester, Minn.

Patients treated with the niacin and fish oil combination had a modest 6% rise in serum glucose, and an 11% rise in serum levels of LDL cholesterol.

The fall in triglyceride and rise in HDL cholesterol seen in this study was substantially greater than what’s been seen with niacin treatment alone. In past studies, a niacin regimen produced a drop in triglyceride levels of about 40% and a rise in HDL cholesterol of about 15%, and in some patients, a rise in LDL cholesterol.

Patients were on a regular diet and received a placebo treatment during the period of intervention was not longitudinal. Up to 1 g of niacin was divided into 2 g/day for patients taking niacin t.i.d. and 2 g/day for patients taking niacin t.i.d. for 4 weeks, followed by 2 g/day for 12 weeks and then 1 g/day for the next 12 weeks. The fish oil supplement was divided into 2 g/day for patients taking fish oil t.i.d. and 2 g/day for patients taking fish oil t.i.d. for 4 weeks, followed by 2 g/day for 12 weeks and then 1 g/day for the next 12 weeks.

The endpoint analysis showed that the combination of niacin and fish oil produced a significant reduction in triglyceride levels, a significant increase in HDL cholesterol levels, and a significant reduction in LDL cholesterol levels. The combination of niacin and fish oil also produced a significant reduction in the risk of developing coronary heart disease.

The combination of niacin and fish oil was well tolerated, with no significant side effects reported. The most common side effects reported were gastrointestinal in nature, including nausea, diarrhea, and abdominal pain. The combination of niacin and fish oil also produced a significant reduction in the risk of developing diabetes.

In conclusion, the combination of niacin and fish oil is a promising therapeutic option for patients with arteriosclerotic dyslipidemia. Further studies are needed to determine the optimal dose and duration of treatment, as well as the long-term effects of this combination on cardiovascular risk.

Patients with diabetes have a higher risk of developing cardiovascular disease. Therefore, it is important to optimize lipid management in patients with diabetes. The combination of niacin and fish oil offers a promising option for achieving this goal.

The study was funded by a grant from the National Heart, Lung, and Blood Institute.