ABSTRACT

A Prospective, Open Label Comparison of Ezetimibe, Niacin, and Colestipol as Adjunct Therapy in Lipid Reduction

Objective: To compare LDL reduction compared to baseline in patients using maximum tolerated HMG CoA Reductase inhibitor (statin) therapy with adjunctive therapy with ezetimibe, colestipol, or niacin. The patient's cardiovascular risks are assessed to determine if National Cholesterol Education Program's Adult Treatment Panel III (NCEP ATP III) guidelines for low density lipoprotein (LDL) reduction were achieved between the three groups. Secondary measures examine the safety issues with liver function test (LFT) monitoring and rhabdomyolysis. High-density lipoproteins (HDL) elevations are monitored between the three groups to determine efficacy as a secondary outcome.

Research Design: A 12-week prospective, randomized, open label trial comparing ezetimibe, niacin, and colestipol as adjunct therapy in lipid management.

Methodology: Patients with hyperlipidemia who sign consent and who are currently at maximum tolerated dose of a statin and are not meeting NCEP ATPIII treatment goals for LDL cholesterol are enrolled in 12-week open label, prospective trial. Patients are randomized into one of three groups to receive ezetimibe, niacin, or colestipol in addition to current statin therapy. Patients are titrated as tolerated to therapeutic doses of study medications (ezetimibe 10mg/day, niacin 1500mg/day, and colestipol 20gm/day). At baseline, informed consent; a laboratory admission profile (Chem20); weight; height; blood pressure; concomitant medications; cholesterol medication history; and grapefruit juice consumption data are gathered. At weeks 6 and 12, patients have their cholesterol panels and liver function tests assessed. Patients are also interviewed regarding side effects (including rhabdomyolsis), tolerance, changes in concomitant medications, and grapefruit juice consumption, along with weight and blood pressure measurements.

Significance: The NCEP ATP III guidelines are the recommended outcome measures for cholesterol levels to yield reductions in cardiovascular events. Reduction in low-density lipoprotein (LDL) has been associated with a decrease in mortality and morbidity. The standard treatment is a class of medications known as the HMG-CoA reductase inhibitors as monotherapy. A newer medication called ezetimibe (Zetia) has been approved as adjunct therapy with a statin in those patients who are unable to achieve LDL goals with monotherapy. The older therapies have never been evaluated in a controlled trial as adjunct therapy with the statins. This study compares LDL reduction and HDL elevation from baseline of statin monotherapy with adjunct ezetimibe, colestipol, or niacin, while also evaluating tolerance.