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COMBINATION THERAPY WITH PRAVASTATIN AND VALSARTAN HAS ADDITIVE EFFECTS TO IMPROVE METABOLIC PHENOTYPES OVER MONOTHERAPY IN PATIENTS WITH HYPERCHOLESTEROLEMIA

Moderated Poster Contributions
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Background: Angiotensin II type 1 receptor blocker therapy improves metabolic phenotypes. Moreover, pravastatin is the only statin that improves insulin resistance and glucose homeostasis. Therefore, we evaluated metabolic responses to pravastatin and valsartan therapy, alone or in combination, in hypercholesterolemic patients.

Methods: Forty-nine hypercholesterolemic patients were given pravastatin 40 mg and placebo, pravastatin 40 mg and valsartan 160 mg, or valsartan 160 mg and placebo daily during each 2 month treatment period in a randomized, single-blind, placebo-controlled cross-over trial with three treatment arms and two washout periods (each 2 months).

Results: When compared with pravastatin alone, valsartan alone or combined therapy significantly changed blood pressure ($P<0.05$ by ANOVA). When compared with valsartan alone, pravastatin alone or combined therapy significantly changed lipoproteins levels ($P<0.001$ by ANOVA). We also observed improvement in metabolic phenotypes with all three treatments causing increased plasma adiponectin levels, reduced fasting plasma insulin levels, and increased insulin sensitivity (determined by QUICKI) relative to baseline measurements. For the first time in a statin combination trial, pravastatin combined with valsartan therapy increased plasma adiponectin, lowered fasting insulin, and improved insulin sensitivity in an additive manner when compared with either monotherapy alone ($P=0.004$, $P=0.036$, and $P=0.041$ by ANOVA on Ranks, respectively).

Conclusions: Pravastatin combined with valsartan improved metabolic phenotypes in an additive fashion in patients with hypercholesterolemia. These results have therapeutic implications for optimal treatment of patients who have both cardiovascular and metabolic risk factors.