Effects of rosuvastatin versus atorvastatin alone or in combination, on lipoprotein (a): a single center study

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OBJECTIVE: To compare the effect of rosuvastatin versus atorvastatin alone, and in combination with niacin or fibrates, on elevated lp(a).

METHOD: Patients with lp(a) >50 mg/dl, with cardiovascular disease (CVD), and high/very high SCORE risk, already on statin therapy because of a compelling indications. Analyzed variables: age, gender, risk factors, co-morbidities, SCORE risk, myoglobin, enzymes: CPK, AST, ALT, LP fractions (TG, CHOL, HDL-C, LDL-C, ApoA1, ApoB and Lp(a)). Patients were divided in four groups depending on the therapy: rosuvastatin 40 mg, atorvastatin 80 mg, atorvastatin 40 mg add-on fenofibrate, and atorvastatin 40 mg add-on 1 g ER (extended-release) niacin. We compared the four treatment regimens in their therapeutic efficiency [especially for lp(a)], and safety profile.

RESULTS: 87 pts, at mean age 61±12 years, were analyzed. Obesity (64.7%) and arterial hypertension (64.6%) were main risk factors. Males predominated, had 5.1 OR for smoking, 2.8 OR for CVD, had higher risk profile, but lower total and LDL-C (5.3 vs. 6.2, p=0.002; and 3.5 vs. 4.2, respectively). Mean lp(a) at the starting point was 94.6±39.6 mg/dl, without gender difference. 25 pts. received rosuvastatin, 22 atorvastatin, 20 fibrate+atorvastatin, and 20 niacin+atorvastatin, without inter-group differences in LP fractions at the beginning of the follow up. Significant decrease of all LP fractions was registered after 6 month treatment. Mean lp(a) reduction was 15.9±21.0 mg/dl, with only 16% of patients achieving an lp(a) <50mg/dl. Rosuvastatin was the most efficient on all LP fractions, the mean reduction of lp(a) was 18.2±24.8 mg/dl (p=0.001), similar effect was achieved with atorvastatin in combination with fibrates or niacin (17.3±10.4; p=0.001; and 19.5±10.9, p=0.001 respectively), while high dose atorvastatin alone, was inferior. Rosuvastatin was the only treatment that had beneficial effect on all LP fractions (C p=0.000, LDL-C p=0.001, ApoB p=0.001, TG p=0.000, and increasing of HDL-C p=0.001 and ApoA1 p=0.014). No significant side effects were observed.

CONCLUSION: Rosuvastatin was the most potent agent in reduction of lp(a), and the only one that had beneficial effect on all LP fractions. Rosuvastatin was superior to equipotent dose of atorvastatin. Therapeutic effect of atorvastatin in lp(a) reduction is accentuated when combined with fibrates or nicotinic acid. Given in a recommended doses, all agents are safe. ¹⁻³

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LITERATURE

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