Abstract

Introduction Numerous clinical trials have shown that statins reduce cardiovascular events, both in primary and secondary prevention. There is, however, considerable individual variation in the expected response for each dose and type of statin; therefore, detection of hypo-responder patients would allow considering additional hypolipidemic treatment. Objectives The aims of this study were to evaluate the response to statins in cardiovascular prevention patients and to analyze the characteristics of hypo-responder subjects. Methods Consecutive outpatients receiving statins were included. The treating physician defined the type and dose of statin used. The lipid profile was assessed at baseline and post-treatment (6-24 weeks). The distribution of LDL-C reduction for each type and dose of statin was analyzed and “low response” was defined according to two strategies: if the percent reduction was below the median or below the 25th percentile. Univariate and multivariate analyses were performed. Results A total of 446 patients (52% female, 25% diabetic, 80% primary prevention, age 58 ± 11 years) were included in the study. Mean LDL-C reduction was 27%, 38% and 43% for simvastatin 10, 20 and 40 mg, respectively, 36% and 43% for atorvastatin 10 and 20 mg, respectively, and 44% and 49% for rosuvastatin 10 and 20 mg, respectively. Hyporesponsiveness defined by both strategies (median and 25th percentile) showed that male gender (OR 2.54 and 2.31), diabetes (OR 2.0 and 3.85), age (every 5 years, OR 0.87 and 0.83) and baseline LDL-C (every 10 mg/dL, OR 0.78 and 0.77) were independently associated with greater chance of being hypo-responder. Conclusions LDL-C reduction by different statins was similar to previous reports. Men, diabetics, younger subjects or with lower baseline LDL-C were more likely to show poor response to statins.

Keywords

Statins, LDL Cholesterol, Hypo-responders