EFFECTIVENESS OF ROSEUVASTATIN COMPARED TO OTHER STATINS FOR THE PREVENTION OF FATAL AND NON-FATAL CARDIOVASCULAR EVENTS IN CLINICAL PRACTICE—AN EPIDEMIOLOGICAL STUDY

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OBJECTIVES: This study compared the effectiveness of rosuvastatin (RSV) to other statins prescribed in clinical practice in prevention of fatal and non-fatal cardiovascular (CV) events.

METHODS: This longitudinal inception cohort study, conducted using MedStat MarketScan research databases, included patients aged ≥18 who started statin therapy during August 2003 to December 2005. Patients were followed until 90 days after index statin monotherapy exposure, an event, end of eligibility, or end of study. The primary endpoint was a composite of CV death (in-hospital only), myocardial infarction, unstable angina, coronary revascularization, stroke, and carotid revascularization. Adjusted time-to-event analyses incorporating a propensity score covariate were used, and analyses were stratified by duration of statin exposure.

RESULTS: Among 395,039 patients who met inclusion/exclusion criteria, 12% initiated rosuvastatin (RSV), and 9,622 (2.4%) experienced an outcome event (3.7 per 100 statin exposure).

CONCLUSION: A regression analysis of 9 randomised controlled trials (RCTs) from the CRESTOR clinical trial programme.
mean LDL-C reduction and difference in event rate between statin and placebo arms in published outcomes studies (4S, CARE, LIPID, HPS), was performed for major clinical endpoints. A model was developed to estimate LDL-C reductions using alternative baseline LDL-C values and the weighted mean difference (WMD) from the meta-analysis. These were combined with results from regression analyses to calculate percentage reduction in cardiovascular events and impact estimated for a population of 100,000. The model was also run using the 95% confidence intervals from the meta-analysis. RESULTS: Meta-analysis demonstrated a significant reduction in LDL-C in favour of rosuvastatin 40 mg (WMD -5.26%, 95% CI: -6.08% to -4.43%; p < 0.00001). There was no significant heterogeneity identified in the meta-analysis (p = 0.42) with low inconsistency in trial results (I² = 2.1%). Regression analyses showed good correlation (R² > 0.65) between LDL-C reduction and percentage difference in event rates for coronary death, major coronary event, non-fatal myocardial infarction (MI) and revascularisations (CABG and PCTA). Simulations using alternative LDL-C distributions with means varying from 3.40–7.56 mmol/L generated LDL-C reductions of 1.68–3.78 and 1.85–4.18 for rosuvastatin 20 mg and 40 mg, respectively. These values translated into the following reductions depending on the mean of the distribution: 0.33%–0.74% coronary deaths; 0.72%–1.62% major coronary events; 0.52%–1.17% non-fatal MIs; 0.59%–1.32% revascularisation procedures. Based on a population of 100,000, the incremental benefit of rosuvastatin 40 mg over 20 mg resulted in the prevention of 329–742 coronary deaths, 721–1,624 major coronary events, 517–1,165 non-fatal MIs and 586–1,321 revascularisation procedures. CONCLUSION: Rosuvastatin 40 mg reduces LDL-C significantly more than 20 mg. Modelled outcomes suggest this may translate into substantially fewer cardiovascular-related events.

DIFFERENCES IN CHOLESTEROL LEVELS BETWEEN STATIN AND FIBRATE TREATED PATIENTS IN FRENCH, ITALIAN AND UNITED KINGDOM PRIMARY CARE
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OBJECTIVES: With the lowering of the recommended cholesterol levels in Europe, use of lipid lowering drugs has become a more important clinical option. The study aim was to determine total cholesterol levels by type of lipid lowering therapy in the primary care setting in France, Italy and the UK. METHODS: The study populations were identified from the THALES (France, Italy) and The Health Improvement Network “THIN” (UK) primary care databases. Patients were included if they received a fibrate or statin prescription in the first 6 months of 2005 (index), had a prescription at least 6 months before index and had a valid cholesterol record during the 12 months after index. To account for differing cholesterol reporting habits, analyses were restricted to general practitioners with cholesterol reporting rate >50%. Multivariate linear regression was applied to compare the effect of drug type on cholesterol level by country. RESULTS: The rates of statin use were 71%, 88% and 97% for France, Italy and the UK respectively. In France, the median cholesterol was 5.2 mmol/L among statin users (n = 22674; mean age = 65; male = 57%) compared to 5.3 mmol/L among fibrate users (n = 9283; age = 66; male = 46%). In Italy, the median cholesterol was 5.2 mmol/L among statin users (n = 4822; age = 67; male = 48%) compared to 5.4 mmol/L among fibrates users (n = 641; age = 65; male = 56%). In the UK, median cholesterol was 4.4 mmol/L among statin users (n = 113232; age = 67; male = 55%) compared to 5.1 mmol/L among fibrate users (n = 3626; age = 65; male = 49%). For each country, statin therapy was associated (p < 0.001) with lower median cholesterol level after controlling for age, gender, diabetes and coronary heart disease. CONCLUSION: The use of statins in primary care was dominant in all countries studied, although prescribing habits varied. Cholesterol levels were lower among statin users than fibrate users and this difference was greatest in the UK.