Abstract: P1877

LDL-C treatment patterns and associated outcomes in patients with type 2 diabetes and CVD: insights from TECOS

Authors:
G.M. De Ferrari¹, S.R. Stevens², G. Ambrosio³, S. Leonardi⁴, D.K. McGuire⁵, P.W. Armstrong⁶, J.B. Green², M.A. Bethel⁷, R.R. Holman⁷, E.D. Peterson², ¹Coronary Care Unit &##x2013; Fondazione IRCCS Policlinico San Matteo and University of Pavia, Department of Molecular Medicine - Pavia - Italy, ²Duke Clinical Research Institute - Durham - United States of America, ³University of Perugia - Perugia - Italy, ⁴Policlinic Foundation San Matteo IRCCCS, Department of Cardiology - Pavia - Italy, ⁵University of Texas Southwestern Medical School - Dallas - United States of America, ⁶Canadian Vigour Center - Edmonton - Canada, ⁷Oxford Centre for Diabetes - Oxford - United Kingdom,

On behalf: TECOS Study Group

Topic(s):
Lipid-Lowering Agents

Citation:
European Heart Journal ( 2018 ) 39 ( Supplement ), 399-400

Funding Acknowledgements:
Merck Sharp & Dohme Corp. a subsidiary of Merck & Co., Inc.

Background: Patients with diabetes mellitus (DM) are at increased risk for cardiovascular (CV) events. Current CV Guidelines recommend LDL-C levels ≤70 mg/dL (1.8 mM) for DM patients with CV disease while a recent endocrinology guideline (AACE) proposes an LDL-C target of ≤55 mg/dL for DM and a recent acute coronary syndrome.

Purpose: Using data from TECOS, an international CV outcomes trial of sitagliptin vs placebo, we sought to 1) determine contemporary LDL-C treatment among patients with DM and CV disease; and 2) determine the associations between baseline LDL-C and subsequent risk for 5-year CV outcomes.

Methods: Association between baseline LDL-C and 5 year MACE (CV death, non-fatal MI, or non-fatal stroke) was assessed using multivariable adjusted Cox regression analysis.

Results: Overall, 11,066/14,671 (75.4%) TECOS patients had a baseline LDL-C measurement. Their median (25th, 75th percentiles) age was 65 years (60, 71), 71.5% were male, the median duration of DM was 10 years (6, 16), HbA1c 7.2% (6.8, 7.6). At baseline, 82.5% and 5.8% of patients were taking statins and ezetimibe respectively. LDL-C was ≤55 mg/dL in 14.3%; 55.1 to 70 in 18.4%, 70.1 to 100 in 35% and >100 in 32.3%. Each 10 mg/dL of higher LDL-C was associated with increased risk of CV death (HR 1.06; 95% CI 1.04–1.09) and MACE (HR 1.05; 95% CI 1.03–1.07). The probability of MACE as a function of baseline LDL-C, along with 95% confidence limits, is depicted in the Figure.

Conclusions: While the majority of DM patients with stable CV disease in real world practice were on LDL-C lowering therapy, only one third had an LDL-C at or below current target goals and only one in seven patients were below more stringent AACE-proposed LDL target. Every 10 mg higher LDL-C was independently associated with a 6% increased hazard for CV death and 5% for MACE.
Abstract: LDL-C treatment patterns and associated outcomes in patients with type 2 diabetes and CVD: insights from TECOS


Coronary Care Unit – Fondazione IRCCS Policlinico San Matteo and University of Pavia, Department of Molecular Medicine – Pavia – Italy, 2 Duke Clinical Research Institute – Durham – United States of America, 3 University of Perugia – Perugia – Italy, 4 Policlinic Foundation San Matteo IRCCS, Department of Cardiology – Pavia – Italy, 5 University of Texas Southwestern Medical School – Dallas – United States of America, 6 Canadian Vigour Center – Edmonton – Canada, 7 Oxford Centre for Diabetes – Oxford – United Kingdom,

On behalf: TECOS Study Group

Topic(s): Lipid-Lowering Agents

Citation: European Heart Journal (2018) 39 (Supplement), 399-400

Funding Acknowledgements: Merck Sharp & Dohme Corp. a subsidiary of Merck & Co., Inc.

Background: Patients with diabetes mellitus (DM) are at increased risk for cardiovascular (CV) events. Current CV Guidelines recommend LDL-C levels ≤70 mg/dL (1.8 mM) for DM patients with CV disease while a recent endocrinology guideline (AACE) proposes an LDL-C target of ≤55 mg/dL for DM and a recent acute coronary syndrome.

Purpose: Using data from TECOS, an international CV outcomes trial of sitagliptin vs placebo, we sought to 1) determine contemporary LDL-C treatment among patients with DM and CV disease; and 2) determine the associations between baseline LDL-C and subsequent risk for 5-year CV outcomes.

Methods: Association between baseline LDL-C and 5 year MACE (CV death, non-fatal MI, or non-fatal stroke) was assessed using multivariable adjusted Cox regression analysis.

Results: Overall, 11,066/14,671 (75.4%) TECOS patients had a baseline LDL-C measurement. Their median (25th, 75th percentiles) age was 65 years (60, 71), 71.5% were male, the median duration of DM was 10 years (6, 16), HbA1c 7.2% (6.8, 7.6). At baseline, 82.5% and 5.8% of patients were taking statins and ezetimibe respectively. LDL-C was ≤55 mg/dL in 14.3%; 55.1 to 70 in 18.4%, 70.1 to 100 in 35% and >100 in 32.3%. Each 10 mg/dL of higher LDL-C was associated with increased risk of CV death (HR 1.06; 95% CI 1.04–1.09) and MACE (HR 1.05; 95% CI 1.03–1.07). The probability of MACE as a function of baseline LDL-C, along with 95% confidence limits, is depicted in the Figure.

Conclusions: While the majority of DM patients with stable CV disease in real world practice were on LDL-C lowering therapy, only one third had an LDL-C at or below current target goals and only one in seven patients were below more stringent AACE-proposed LDL target. Every 10 mg higher LDL-C was independently associated with a 6% increased hazard for CV death and 5% for MACE.

Figure 1