

mortality was -1.00% (95% CI -1.38% to -0.44% ; number needed to treat [NNT] 100) in the intention-to-treat analysis and -2.09% (95% CI -2.54% to -1.44% ; NNT 48) in the per protocol analysis. Across QRISK3 strata, similar estimates were obtained against major cardiovascular disease. In subgroup analyses, patients with elevated non-high-density lipoprotein or low-density lipoprotein cholesterol had the largest benefit from statin initiation. Some estimates indicated a small increased risk of myopathy, but no associated increased risk of liver dysfunction.

Conclusions: Among adults with T2DM, statin initiation was associated with a reduction in all-cause mortality and major cardiovascular disease across the full spectrum of QRISK3 scores. The findings will aid clinicians and patients with shared decision making for initiating statin therapy in persons with T2DM, especially when predicted 10-year risk of cardiovascular disease is $<10\%$.

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Poster Topic: AS04 CLINICAL VASCULAR DISEASE / AS04.09 Lipid-lowering therapies

Lomitapide in pediatric patients with homozygous familial hypercholesterolemia: A potential game changer for a rare disease

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Background and Aims: Homozygous Familial Hypercholesterolemia (HoFH) is a rare disease characterized by LDL cholesterol (LDL-C) levels >400 mg/dL due to mutations in the LDL receptor (LDLR), apo-B, PCSK9 and LDLRAP1 genes. If untreated, HoFH patients have a life expectancy of less than 20 years. Pharmacological approaches currently used in pediatric patients (statins, ezetimibe, and PCSK9 inhibitors) are insufficient to achieve optimal LDL-C control and it is often necessary to resort to an invasive method such as lipoprotein apheresis. Nevertheless, most patients do not reach the therapeutic goal of LDL-C <115 mg/dL. Lomitapide is an oral inhibitor of microsomal triglyceride transfer protein (MTP), which reduces the production of apo-B-containing lipoproteins in the liver and intestine. The drug, already approved in adults, reduces LDL-C regardless of residual LDLR activity. Aim of the study: to evaluate the safety and efficacy of lomitapide use in HoFH pediatric patients on stable lipid-lowering therapy.

Methods: 4 HoFH children, aged 8 to 12 years, were evaluated. These patients, originally selected for a 2-year multicenter open-label international study, continued to take lomitapide as part of a compassionate-use follow-up trial. Lomitapide was added to statins, ezetimibe and lipoprotein apheresis and progressively titrated up to the maximum tolerated dose. Subjects were monitored regularly with outpatient visits, blood tests, ECG and imaging.

Results: In our cohort, a 20 mg dose of lomitapide, in addition to standard therapy, reduced LDL-C by an average of 38.4% (324 ± 52 vs 198 ± 82 mg/dL; mean \pm SD) at week 24, allowing lipoprotein apheresis to be reduced or discontinued. The effect remained stable over 2 years. The drug was well tolerated and neither gastrointestinal nor hepatic adverse events were observed.

Conclusions: The use of lomitapide is safe, effective and well tolerated in HoFH children. Lomitapide resulted in a reduction/discontinuation of apheresis sessions, leading to a significantly improved quality of life.

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Poster Topic: AS04 CLINICAL VASCULAR DISEASE / AS04.09 Lipid-lowering therapies

The role of statin therapy in atherosclerotic plaque stabilization in a patient with elevated Lp(a): A clinical case

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Background and Aims: A 50-year-old female was referred to the lipid clinic due to elevated lipoprotein(a) [Lp(a)]. Her medical history also included hypertension and peripheral vascular disease. The treatment regimen consisted of rosuvastatin 20 mg, ezetimibe 10 mg, bisoprolol 5 mg, amlodipine 5 mg, and hydrochlorothiazide 12.5 mg.

Methods: A routine cardiac computed tomography (CT) scan identified non-obstructive coronary artery disease with soft and mixed (calcified and non-calcified) atherosclerotic plaques in the left anterior descending artery (LAD),

with an initial calcium score of 12 AU (Figure 1A). Preliminary laboratory analyses (Table 1) confirmed hyperlipidemia, with the following lipid levels: total cholesterol 156 mg/dL, low-density lipoprotein cholesterol 70 mg/dL, high-density lipoprotein cholesterol (HDL-C) 75 mg/dL, Non-HDL-C 81 mg/dL, triglycerides 53 mg/dL, and Lp(a) 70 mg/dL.

Results: Rosuvastatin therapy was intensified to 40 mg following detection of soft atherosclerotic plaques in the LAD. Over 52 weeks, significant improvements were observed in most lipid markers, including a slight reduction in Lp(a) levels, which remained elevated (Table 1), and an increase in HDL-C. Post-intervention cardiac CT scans revealed notable improvements, with mixed atherosclerotic plaques in the LAD evolving into fully calcified plaques (Figure 1B). These findings were corroborated by a second coronary angiogram, which demonstrated an increase in the calcium score to 46 AU.

Figure 1: (A) Initial cardiac computed tomography showing soft and mixed atherosclerotic plaques (B) Cardiac computed tomography at 52 weeks post-intervention revealing calcified atherosclerotic plaques.

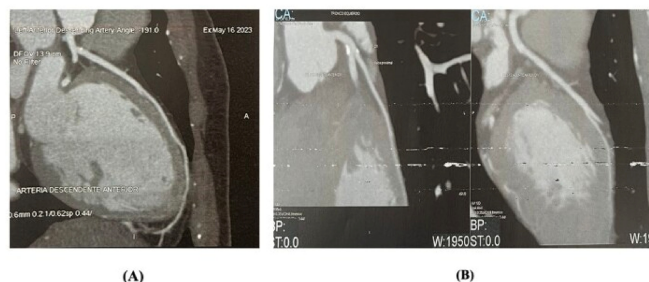


Table 1: Laboratory Analysis Before and After Statin Therapy

Lipid Marker	Statin	
	Pre-Treatment (mg/dL)	Post-Treatment (mg/dL)
Total Cholesterol	156	166
LDL-C	70	68
HDL-C	75	89
Non-HDL-C	81	77
Triglycerides	53	51
Lp(a)	70	58

Conclusions: Elevated Lp(a) significantly contributes to plaque formation. While statins are widely used to manage lipid levels and reduce cardiovascular risk by stabilizing plaques and slowing atherosclerosis progression, their impact on plaque stability in patients with elevated Lp(a) remains uncertain. Statins are not intended to lower Lp(a) levels and may increase them by up to 15%. However, combined with exercise and a healthy diet, their primary goal is to reduce inflammation and atherogenicity, thereby lowering thrombosis risk.

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Poster Topic: AS04 CLINICAL VASCULAR DISEASE / AS04.09 Lipid-lowering therapies

Statin therapy in chronic heart failure with reduced ejection fraction: A post-HOC analysis of T.O.S.C.A. registry

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Background and Aims: Statin treatment (ST) reduce death for Coronary Artery Disease (CAD) and occurrence of Heart Failure (HF) in individuals with CAD. However, while observational studies reported benefits of ST in HF, RCTs showed no effect on CV mortality and incidence of Myocardial Infarction in patients with HF of different etiology, mostly Ischemic Etiology (IE). Aim of the study was to evaluate if ST was associated with all-cause mortality (ACM) or hospitalization for CV causes (HCV) in individuals with HFrEF.

Methods: Data were gathered from the T.O.S.C.A. Registry (NCT023358017), an observational multicentric prospective study enrolling patients with chronic but