Association between High-Intensity Statin Adherence and Cholesterol Reduction in Veterans with Chronic Kidney Disease

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BACKGROUND

- Chronic kidney disease (CKD) affects 30 million adults in the U.S.1
- CKD = cardiovascular risk equivalent
- Role of statin therapy is well-established in primary/secondary prevention of atherosclerotic cardiovascular disease (ASCVD)

OBJECTIVES

- The primary outcome was to evaluate the relationship between high-intensity statin adherence (MPR ≥ 80%) versus high-intensity statin nonadherence (MPR < 80%) and LDL-c reduction
- The secondary outcome was to assess the safety of high-intensity statins in patients demonstrating adherence versus nonadherence on the basis of adverse events and liver enzyme abnormalities

RESULTS

Inclusion Criteria
- Age ≥ 40 and ≤ 75 years with T2DM and LDL-c ≥ 189 mg/dL
- Concurrent non-statin lipid lowering therapy
- Switched statins during study
- Admitted for more than 30 consecutive days
- Non-VA statin medication
- New diagnosis of ASCVD within 1 month of statin initiation

Exclusion Criteria
- eGFR > 60 mL/min/1.73m² or < 15 mL/min/1.73m²
- Renal impairment
- Should not exceed 30mg/day in severe CKD

No renal adjustments

METHODS

- A retrospective chart review
- Evaluated patients with CKD
- Medication prescription practices included: Atorvastatin 40 mg or 80 mg daily

RESULTS

Baseline Characteristic

Nonadherent (n = 10) Adherent (n = 10) P-Value
Age, years; median (IQR) 66 (57, 74) 68 (62, 71) 0.85
Male, % 100 100 0.85
Race, % 0.48
White/Caucasian 50 70 —
Black/African American 40 20 —
Native Hawaiian/Declined to Answer 10 10 —
Statin Benefit Group, % Nonadherent (n = 10) Adherent (n = 10) P-Value
Age, years; median (IQR) 66 (57, 74) 68 (62, 71) 0.85
Male, % 100 100 0.85
Race, % 0.48
White/Caucasian 50 70 —
Black/African American 40 20 —
Native Hawaiian/Declined to Answer 10 10 —
Statin Benefit Group, %
- LDL-c mg/dL; median (IQR) 138.1 (102.2, 156.4) 83.7 (57, 106) 0.03
- HDL-c mg/dL; median (IQR) 34 (23.4, 45) 48.5 (44.5, 46.6) 0.006
- Total Cholesterol, mg/dL; median (IQR) 197.5 (171.5, 219) 170.5 (156.9, 181) 0.13

REFERENCES