Real-world evidence evaluation of LDL-C among hospitalized patients: a population-based observational study in the timeframe 2021-2022

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7European registries and retrospective cohorts highlighted the lack of low-density lipoprotein-cholesterol (LDL-C) goal achievement in many very high-risk patients. Hospitalized patients are often frail, and frailty is associated with all-cause mortality and cardiovascular mortality. Aim of this study is to evaluate LDL-C levels in a Real-World setting of inpatients, identify cardiovascular risk categories and highlight treatment gaps in the implementation of LDL-C control.

Methods: This retrospective, observational study included all adult patients admitted at an Italian hospital between 2021-2022 and with LDL-C values available during hospitalization. Disease-related real-world data were collected from Hospital Information Systems using automated data extraction strategies and through the implementation of a patient-centered data repository (the Dyslipidemia Data Mart). Assessment of cardiovascular risk profiles, LDL-C target achievement according to the 2019 ESC/EAS guidelines and lipid-lowering therapies (LLT) use were performed.

Results: 13,834 patients were included: 17.15%, 13.72%, 16.82% and 49.76% were low (L), moderate (M), high (H) and very high-risk (VH) patients, respectively. The percentage of in-target patients was progressively lower moving towards worse categories (78.79% in L, 58.38% in M, 33.3% in H and 21.37% in VH). Among LLT treated patients in VH category, in-target are 28.48%; 47.6% in H, 69.12% in M and 68.47% in L. The impact of monotherapies and combination therapies on target achievement was also analyzed.

Conclusions: This study depicts LDL-C control among an entire population of inpatients, highlighting relevant gaps especially in VH category. Future efforts must aim to reduce the cardiovascular risk of these subjects.

Using AI to identify left ventricular ejection fraction from the ECG: The SOLOMAX (SOciaL NetwOrk of MedicAI Experiences) project

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