

LDL-C values at admission and outcomes of patients with acute coronary syndrome (ACS): do we know what is a missing part of the puzzle?

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Introduction: In our recent study¹, we examined the characteristics and clinical outcomes of the proportion of statin-naïve patients in our practice who had normal low-density lipoprotein cholesterol (LDL-C) upon admission for acute coronary syndrome (ACS). A total of 15% of patients had normal LDL-C (< 2.6 mmol/L) upon admission, and these patients had significantly higher mortality throughout long-term follow-up as well as in-hospital mortality.

Patients and Methods: After the analysis of our CaRD registry (NCT06090591), we postulated that lipoprotein(a), or Lp(a), might be the final missing piece in ACS conundrum. Since this biomarker has recently become readily available in our institution, we conducted a small pilot study which included 90 patients who presented with ACS in the period between June 2024 and September 2024.

Results: According to previous study¹, patients with normal LDL-C values at admission were considerably older (median 67 vs. 62 years), with worse renal function, had considerably higher rates of peripheral artery disease (PAD) (14% vs. 9%) and diabetes mellitus (DM) (26% vs. 17%). In our pilot study, patients with those comorbidities also had lower levels of Lp(a). Additionally, we discovered that patients with higher LDL-C values at admission were likely to have higher Lp(a) levels as well.

Conclusions: Although examining Lp(a) values in a different patient cohort is a drawback of our study, the propensity score analysis leads us to the conclusion that Lp(a) is probably not the missing piece of the puzzle, and that further research is needed to understand why patients with normal LDL-C values who were admitted for ACS had worse outcomes.

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LITERATURE

1. Jurin I, Jurišić A, Rudež I, Kurtić E, Skorić I, Čikara T, et al. Outcomes of Patients with Normal LDL-Cholesterol at Admission for Acute Coronary Syndromes: Lower Is Not Always Better. *J Cardiovasc Dev Dis.* 2024 Apr 15;11(4):120. <https://doi.org/10.3390/jcdd11040120>