

**PREVALENCE OF ELEVATED LIPOPROTEIN(A) LEVELS IN PATIENTS
WITH CORONARY ARTERY DISEASE IN THE ARAL SEA REGION**

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Elevated levels of lipoprotein(a) (Lp(a)) and high-sensitivity C-reactive protein (hs-CRP) are considered independent factors associated with an increased risk of atherothrombotic cardiovascular events (Marcello R.P. Markus, 2025). In particular, elevated Lp(a) levels have been associated with an increased risk of coronary events, stroke, and all-cause mortality (Erqou S., 2017).

To assess the prevalence of elevated Lp(a) and hs-CRP levels in patients with coronary artery disease (CAD) referred for percutaneous coronary intervention (PCI) in the Aral Sea region.

The study included 275 patients with coronary artery disease (CAD), including 192 men and 83 women. The study population comprised patients with chronic coronary syndrome (n=158), non-ST-segment elevation myocardial infarction (NSTEMI) (n=47), and ST-segment elevation myocardial infarction (STEMI) (n=70). The mean age of the patients was 60.9±9.1 years. According to Lp(a) levels, the patients were divided into three groups: Group 1 — Lp(a) <30 mg/dL; Group 2 — Lp(a) 30–50 mg/dL; and Group 3 — Lp(a) >50 mg/dL. Lp(a) and high-sensitivity C-reactive protein (hs-CRP) levels were measured using a Cobas c311 automated biochemical analyzer. Statistical analysis was performed using IBM SPSS Statistics version 27. Distribution normality was tested by the Kolmogorova-Smirnova test; groups were compared using Student's t-test or the Mann-Whitney U test. Differences were considered statistically significant at p<0.05.

The study showed that the median Lp(a) concentration in the study cohort was 13.8 [7.0–38.0] mg/dL. Elevated hs-CRP levels (>5 mg/L) were detected in 40% of the patients (n=110). Lp(a) levels >50 mg/dL, which are associated with high cardiovascular risk, were detected in 18.9% of the patients (n=52). The prevalence of Lp(a) levels of 30–50 mg/dL was 12%, while 69.1% of patients had Lp(a) levels <30 mg/dL. The frequency of myocardial infarction as the initial manifestation of CAD was statistically significantly higher in the group with Lp(a) >50 mg/dL compared with both the group with Lp(a) levels of 30–50 mg/dL (p<0.001) and the group with Lp(a) <30 mg/dL (p<0.001). Patients with Lp(a) >50 mg/dL had significantly higher hs-CRP levels compared with patients with Lp(a) <30 mg/dL (8.15 vs. 2.11 mg/L; p=0.046).

Lp(a) levels >50 mg/dL are associated with greater inflammatory activity and a higher frequency of CAD presenting as myocardial infarction.