

Asociación entre noveles elevados de lipoproteína(a) (≥ 50 MG/DL) y la presencia de enfermedad cardiovascular aterosclerótica establecida en adultos de Barranquilla, Colombia.

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RESUMEN

Antecedentes: La enfermedad cardiovascular aterosclerótica (ECVA) constituye una causa principal de morbilidad y mortalidad. La lipoproteína(a) es un marcador predominantemente genético con propiedades aterogénicas y protrombóticas; el umbral ≥ 50 mg/dL se usa con frecuencia para definir niveles elevados. En el Caribe colombiano, la evidencia clínica local sobre la frecuencia de Lp(a) elevada y su asociación con ECVA establecida es limitada.

Objetivo: Analizar la asociación entre Lp(a) ≥ 50 mg/dL y la presencia de ECVA establecida en una población adulta atendida en Barranquilla, Colombia.

Métodos: Estudio observacional analítico, transversal retrospectivo, realizado en una IPS de cuarto nivel en Barranquilla entre el 01 de enero de 2024 y el 30 de agosto de 2025. Se incluyeron adultos (≥ 18 años) con medición de Lp(a) y evaluación clínica documentada ($n = 492$), mediante muestreo no probabilístico por conveniencia. La exposición principal fue Lp(a) < 50 vs ≥ 50 mg/dL. El desenlace fue ECVA establecida (sí/no), definida por antecedente clínico de cardiopatía isquémica, enfermedad cerebrovascular isquémica, enfermedad arterial periférica, enfermedad arterial carotídea o enfermedad ateromatosa de la aorta. Se efectuó análisis descriptivo y bivariado.

Resultados: En la muestra total ($n=492$), la prevalencia de ECVA establecida fue 46,3% (228/492) y la proporción de Lp(a) ≥ 50 mg/dL fue 35,4% (174/492). La edad media fue $62,8 \pm 15,1$ años (mediana 63,5; RIQ 54,0–73,0) y 53,9% fueron hombres (265/492). La Lp(a) presentó media de $42,2 \pm 38,4$ mg/dL y mediana de 27,6 mg/dL (RIQ 10,0–70,6). La prevalencia de ECVA fue 51,1% (89/174) en Lp(a) ≥ 50 mg/dL y 43,7% (139/318) en Lp(a) < 50 mg/dL; la OR cruda fue 1,35 (IC95%: 0,93–1,95), con $\chi^2=2,50$ y $p=0,114$. El subtipo más frecuente de evento fue cardiopatía isquémica (35,0%), seguido de enfermedad cerebrovascular isquémica (8,9%), enfermedad arterial periférica (7,5%), enfermedad arterial carotídea (2,2%) y enfermedad ateromatosa de la aorta (0,8%). Al comparar pacientes con y sin ECVA, en el grupo con evento se observó mayor proporción de hombres (66,2% vs 43,2%; $p<0,001$) y mayor frecuencia de hipertensión (79,4% vs 58,7%; $p<0,001$), prediabetes/diabetes (55,7% vs 43,6%; $p=0,009$), insuficiencia cardíaca (43,0% vs 25,4%; $p<0,001$), enfermedad renal crónica (27,2% vs 17,8%; $p=0,017$), tabaquismo (20,6% vs 12,9%; $p=0,029$) y sobrepeso (41,7% vs 31,8%; $p=0,030$). En el subgrupo sin ECVA ($n=264$), el hipotiroidismo fue más frecuente en Lp(a) ≥ 50 mg/dL (27,1% vs 13,4%; $p=0,0067$). Entre quienes tuvieron Lp(a) ≥ 50 mg/dL ($n=174$), la ECVA se asoció con mayor edad (mediana 65,0 vs 59,0; $p=0,012$), mayor proporción de hombres (69,7% vs 38,8%; $p<0,001$), hipertensión (78,7% vs 56,5%;

$p=0,002$), insuficiencia cardiaca (47,2% vs 23,5%; $p=0,001$) y sobrepeso (44,9% vs 28,2%; $p=0,022$).

Conclusiones: En esta cohorte clínica de Barranquilla, el análisis bivariado mostró una asociación cruda positiva pero no estadísticamente significativa entre $Lp(a) \geq 50$ mg/dL y ECVA establecida. La ECVA se concentró en perfiles de mayor riesgo cardiovascular tradicional, lo que respalda interpretar $Lp(a)$ dentro de una evaluación integral del riesgo.

Palabras clave: Lipoproteína(a); Enfermedad cardiovascular aterosclerótica; Factores de riesgo; Estudios transversales.

ABSTRACT

Background: Atherosclerotic cardiovascular disease (ASCVD) is a leading cause of morbidity and mortality. Lipoprotein(a) [Lp(a)] is a predominantly genetically determined biomarker with atherogenic and prothrombotic properties; a threshold of ≥ 50 mg/dL is commonly used to define elevated levels. In the Colombian Caribbean region, local clinical evidence on the frequency of elevated Lp(a) and its association with established ASCVD is limited.

Objective: To analyze the association between Lp(a) ≥ 50 mg/dL and the presence of established ASCVD in an adult population receiving care in Barranquilla, Colombia.

Methods: An observational, analytical, retrospective cross-sectional study was conducted at a quaternary-care institution in Barranquilla between January 1, 2024 and August 30, 2025. Adults (≥ 18 years) with an Lp(a) measurement and documented clinical evaluation were included ($n = 492$) using non-probabilistic convenience sampling. The primary exposure was Lp(a) < 50 vs ≥ 50 mg/dL. The outcome was established ASCVD (yes/no), defined by a clinical history of ischemic heart disease, ischemic cerebrovascular disease, peripheral arterial disease, carotid artery disease, or aortic atheromatous disease. Descriptive and bivariate analyses were performed.

Results: In the total study population ($n=492$), the prevalence of established atherosclerotic cardiovascular disease (ASCVD) was 46.3% (228/492), and the proportion with Lp(a) ≥ 50 mg/dL was 35.4% (174/492). The mean age was 62.8 ± 15.1 years (median 63.5; IQR 54.0–73.0), and 53.9% were men (265/492). Mean Lp(a) was 42.2 ± 38.4 mg/dL, with a median of 27.6 mg/dL (IQR 10.0–70.6). The prevalence of ASCVD was 51.1% (89/174) among participants with Lp(a) ≥ 50 mg/dL and 43.7% (139/318) among those with Lp(a) < 50 mg/dL; the crude OR was 1.35 (95%CI: 0.93–1.95), with $\chi^2=2.50$ and $p=0.114$. The most frequent event subtype was ischemic heart disease (35.0%), followed by ischemic cerebrovascular disease (8.9%), peripheral arterial disease (7.5%), carotid artery disease (2.2%), and aortic atheromatous disease (0.8%). Compared with participants without ASCVD, those with events showed a higher proportion of men (66.2% vs 43.2%; $p<0.001$) and a higher frequency of hypertension (79.4% vs 58.7%; $p<0.001$), prediabetes/diabetes (55.7% vs 43.6%; $p=0.009$), heart failure (43.0% vs 25.4%; $p<0.001$), chronic kidney disease (27.2% vs 17.8%; $p=0.017$), smoking (20.6% vs 12.9%; $p=0.029$), and overweight (41.7% vs 31.8%; $p=0.030$). In the subgroup without ASCVD ($n=264$), hypothyroidism was more frequent among those with Lp(a) ≥ 50 mg/dL (27.1% vs 13.4%; $p=0.0067$).

Among participants with Lp(a) ≥ 50 mg/dL (n=174), ASCVD was associated with older age (median 65.0 vs 59.0; p=0.012), a higher proportion of men (69.7% vs 38.8%; p<0.001), hypertension (78.7% vs 56.5%; p=0.002), heart failure (47.2% vs 23.5%; p=0.001), and overweight (44.9% vs 28.2%; p=0.022).

Conclusions: In this clinical cohort from Barranquilla, the bivariate analysis showed a positive but not statistically significant crude association between Lp(a) ≥ 50 mg/dL and established ASCVD. Established ASCVD clustered in individuals with a higher traditional cardiovascular risk profile, supporting interpretation of Lp(a) within a comprehensive risk assessment framework.

Keywords: Lipoprotein(a); Atherosclerotic cardiovascular disease; Risk factors; Cross-sectional studies

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