

# **Caracterización clínica y factores asociados a proteinuria en pacientes afrodescendientes de la región Caribe Colombiana**

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## RESUMEN

La proteinuria es reconocida como un marcador temprano y sensible de daño renal, asociado a una mayor progresión de la enfermedad renal crónica y a un incremento del riesgo cardiovascular. En población afrodescendiente, la presencia de proteinuria adquiere particular relevancia debido a la interacción entre factores clínicos, determinantes sociales, barreras de acceso a los servicios de salud y exposiciones ocupacionales, especialmente en regiones como el Caribe colombiano, donde la evidencia local es limitada y fragmentada.

**Objetivo:** Caracterizar el perfil clínico de los pacientes afrodescendientes de la región Caribe Colombiana y evaluar los factores sociodemográficos, clínicos, ocupacionales y de acceso a los servicios de salud asociados a la presencia de proteinuria durante el periodo 2022–2025.

**Metodología:** Se realizó un estudio observacional, analítico y de corte transversal, incluyendo 1.590 pacientes afrodescendientes adultos de la región Caribe Colombiana. La información fue recolectada a partir de fuentes primarias mediante la aplicación de una encuesta estructurada, complementada con datos de laboratorio para la identificación de proteinuria. Se efectuaron análisis descriptivos y comparativos entre pacientes con y sin proteinuria utilizando pruebas no paramétricas y pruebas de asociación para variables categóricas. Posteriormente, se construyó un modelo de regresión logística multivariada para identificar factores asociados independientes. Se empleó el software R-CRAN, considerando un nivel de significancia estadística de  $p < 0,05$ .

**Resultados:** La prevalencia de proteinuria fue del 21%. Los pacientes con proteinuria presentaron una menor tasa de filtrado glomerular y una mayor frecuencia de hipertensión arterial. En el análisis multivariado, la presencia de proteinuria se asoció de manera independiente con hipertensión arterial, deterioro de la función renal, sexo masculino, falta de afiliación al sistema de salud, consumo de antiinflamatorios no esteroideos y exposición ocupacional a fungicidas. Por el contrario, un mejor acceso a los servicios de salud y un mayor consumo de agua se identificaron como factores protectores.

**Conclusión:** La proteinuria en pacientes afrodescendientes del Caribe colombiano es un hallazgo frecuente y se asocia a una interacción compleja de factores clínicos, sociodemográficos, ocupacionales y estructurales. Estos resultados resaltan la necesidad de estrategias de detección temprana, control de comorbilidades y fortalecimiento del acceso a los servicios de salud, con un enfoque diferencial orientado a reducir inequidades en salud renal en esta población.

**Palabras clave:** proteinuria; enfermedad renal crónica; población afrodescendiente; factores de riesgo; determinantes sociales de la salud; acceso a los servicios de salud; Caribe colombiano.

## ABSTRACT

Proteinuria is recognized as an early and sensitive marker of kidney damage, associated with progression of chronic kidney disease and increased cardiovascular risk. In Afro-descendant populations, proteinuria is of particular relevance due to the interaction between clinical factors, social determinants, barriers to healthcare access, and occupational exposures, especially in regions such as the Colombian Caribbean, where local evidence remains limited.

**Objective:** To characterize the clinical profile of Afro-descendant patients in the Colombian Caribbean region and to evaluate the sociodemographic, clinical, occupational, and healthcare access factors associated with the presence of proteinuria during the period 2022–2025.

**Methods:** An observational, analytical, cross-sectional study was conducted including 1,590 adult Afro-descendant patients from the Colombian Caribbean region. Data were collected from primary sources through a structured survey, complemented with laboratory data for the identification of proteinuria. Descriptive and comparative analyses were performed between patients with and without proteinuria using non-parametric tests and association tests for categorical variables. Subsequently, a multivariable logistic regression model was constructed to identify independent associated factors. Statistical analyses were performed using R software, with a significance level set at  $p < 0.05$ .

**Results:** The prevalence of proteinuria was 21%. Patients with proteinuria exhibited a lower estimated glomerular filtration rate and a higher prevalence of arterial hypertension. In the multivariable analysis, proteinuria was independently associated with arterial hypertension, impaired kidney function, male sex, lack of health insurance coverage, use of nonsteroidal anti-inflammatory drugs, and occupational exposure to fungicides. In contrast, better access to healthcare services and higher water intake were identified as protective factors.

**Conclusion:** Proteinuria is a frequent finding among Afro-descendant patients in the Colombian Caribbean and is associated with a complex interaction of clinical, sociodemographic, occupational, and structural factors. These findings highlight the need for early detection strategies, improved control of comorbidities, and strengthened access to healthcare services, using a differential approach aimed at reducing inequities in kidney health within this population.

**Keywords:** proteinuria; chronic kidney disease; Afro-descendant population; risk factors; social determinants of health; access to healthcare services; Colombian Caribbean.

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