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Supplement First Day of
Prevention of Kidney Disease in Indigenous Communities
March 9-17 2019

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Mokaná, Tubará
Muisca, Bogotá
Necoclí, Antioquia
Uitoto, Meta
Wayuu, Guajira
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The World Kidney Day is celebrated every year on the second Thursday of March. The main objective of this commemoration, promoted by the International Federation of Kidney Foundations (IFKF), is to highlight the issue of kidney health care and the equity in the timely attention of the patients at risk of chronic renal failure. The IFKF, with leadership and intellectual property on the kidney day, promotes every year worldwide among its affiliates the replication of original ideas around a single issue according to its guidelines.1

By the year 2019, the Colombian Association of Nephrology and Arterial Hypertension (ASOCOLNEF), aware of the global importance of the prevention of kidney disease and being in Colombia the natural responsible for ensuring this purpose in the country, joined in a special way the approach Kidney health for everyone everywhere. That is how since 2018 the Board of Directors decided to comply with this international guideline and impact on a population as important as the indigenous communities, very present throughout the Colombian territory. At this point it is important to mention that the International Society of Nephrology (CKH- DP) recognized that the indigenous population is at an disadvantage, with a higher incidence of kidney disease.2 At the national level, ASOCOLNEF encouraged its affiliates to reach the indigenous communities of their regions with activities that honored this global issue, an initiative that was very well welcomed, so much so that the Colombian Association of Pediatric Nephrology (ACONEPE) joined and developed a teamwork in the context of kidney health.

It is known that, due to the slow and silent process, people who develop kidney diseases generally do not realize that they are sick;3 for this reason, ASOCOLNEF, relying on the work and dedication of specialists from all over the country, reached indigenous people from 16 communities on the First Day of Prevention of Kidney Disease in Indigenous Communities. The field activities mobilized voluntarily nearly 200 Colombians, including nephrologists (for adults and pediatric), nurses and health staff, who estimated risk factors and kidney disease in these populations. Therefore, we are proud to present the results of this activity in adults and children belonging to the main Colombian indigenous ethnic groups.

Thus, this initiative has become the first stage of a project that ASOCOLNEF aims to develop on a permanent basis, that intends to support healthcare decision-makers in the need to establish health programs of control and promotion of self-care in each corner of Colombia and with which we will continue joining efforts with the Ministry of Health and Social Protection, the High Cost Account, and ACONEPE, among others, to favor vulnerable populations.

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World kidney day 2019: determination of risk factors for kidney disease in indigenous Colombian adults

Día Mundial del Riñón 2019: determinación de factores de riesgo para enfermedad renal en indígenas adultos colombianos

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Abstract:

Objective: Characterize the factors associated to renal health in Colombian indigenous communities.
Materials and methods: within the framework of World Kidney Day, an observational study was conducted in the Colombian indigenous population. 16

ethnicities were evaluated, with population over 18 years. A renal health survey was conducted and blood pressure, blood glucose, hematuria and proteinuria values were measured. A statistical summary was made and the association between variables was evaluated using χ^2.

Results: The population studied was made up of 1,177 people (Figure 1). 49.8% were men aged between 43±17 years. As for education, 34.5% said they had no studies. 39% of the population was overweight and 16% obese, associated to women (p=0.0k003). 1.4% had been diagnosed with diabetes; 1.7% did not remember. Regarding hypertension 10.4% had been diagnosed, of these 35% had no treatment, 40% of those who said they had no hypertension had blood pressure >130/85 mmHg. Proteinuria was found in 8.8% and hematuria in 4.2%. Although 94.1% belonged to the SGSSS 52.2% considered it was difficult or very difficult to access the health service, and a third had not had medical check-up in the last two years. A multivariate association was found between sex, risk factors and access to health. Being "difficult" or "very difficult" to access medical service for women living in rural areas and hypertensive, they were significantly associated with rural areas, female sex and hypertension.

Conclusion: the CKD incidence is 1.5 times higher in ethnic minorities in developed countries, whose main risk factors are hypertension and diabetes, in our population the poverty that influences access to health services is added.

Keywords: Kidney disease, Indigenous communities, renal health, prevention.

Resumen:

Objetivo: Caracterizar los factores asociados a la salud renal en las comunidades indígenas colombianas.

Materiales y Métodos: En el marco del día mundial del riñón, se realizó un estudio observacional en la población indígena colombiana, se tomaron datos de 16 etnias. Mayores de 18 años. Se realizó una encuesta de salud renal y se midieron los valores de tensión arterial, glucosa en sangre, hematuria y proteinuria. Se realizó un sumario estadístico y se evaluó la asociación entre variables mediante χ^2.

Resultados: La población estudiada fue de 1.177 indígenas (figura 1). El 49.8% fueron hombres con edad de 43±17 años. En cuanto a la educación, 34,5% manifestaron no tener estudios. El 39% de la población tenía sobrepeso y 16% obesidad, asociándose a las mujeres (p=0,0003). 1,4% había sido diagnosticado con diabetes; 1,7% no recordó. Referente a la hipertensión arterial (HTA) 10,4% tenía diagnóstico, de estos 35% no tenía tratamiento; 40% de quienes no tenían HTA, tuvo cifras tensionales >130/85mmHg. Se encontró proteinuria en 8,8% y hematuria en 4,2%. Aunque 94,1% pertenecían al SGSSS, sin embargo, el 52,6% considero difícil o muy difícil acceder al servicio, y un tercio no había tenido revisión médica en los dos últimos años. Se encontró una asociación multivariada entre el sexo, factores de riesgo y el acceso a salud. Siendo "Difícil" o "Muy difícil" acceder a servicio médico para las mujeres que vivían en zonas rurales e hipertensas se asociaron significativamente a zonas rurales, sexo femenino e hipertensión.

Conclusión: La incidencia de ERC es 1,5 veces mayor en minorías étnicas de países desarrollados, cuyos principales factores de riesgo son HTA y diabetes, en nuestra población se suma la pobreza que influye al acceso de servicios de salud.

Palabras clave: Enfermedad renal, comunidades indígenas, salud renal, prevención.

Introduction

Chronic noncommunicable diseases (NCDs) are defined as long evolution processes that are maintained over time and rarely achieve a complete resolution, thus generating a great social and economic burden for those who suffer from them and their families. NCDs are characterized by having multiple etiologies and associated risk factors, and among them stand out cardiovascular diseases, cancer, diabetes, chronic respiratory diseases and chronic kidney disease (CKD).1

Specifically, CKD is defined as the progressive and generally irreversible loss of the glomerular filtration rate, due to changes either in the renal function or structure, which results in a set of symptoms and signs called uremia, and that in its terminal stage is incompatible with life.2 This disease is a public health problem worldwide, since the number of patients increases progressively in both developed and developing countries.3,4

The prevalence of CKD worldwide for the general population is estimated at 13.4%,5 but in many vulnerable populations, such as indigenous communities, this information is

unknown. One of the few investigations in this regard is that of Ferguson et al.,6 where it was found that in indigenous Canadian groups the rates of kidney disease are 2 to 4 times higher than in the general population.

For the year 2010, the Economic Commission for Latin America and the Caribbean reported the existence of 45 million individuals of indigenous peoples in Latin America, which in turn indicated a population increase of 49.3% in the first decade of the 21st century with an average annual growth rate of 4.1%, above the 1.3% of the total of the American continent.7 For its part, Colombia has 102 indigenous peoples that exceed one million members, occupying the second and fifth positions in number of ethnic groups and indigenous inhabitants, respectively.8,9.

Indigenous peoples have their own health systems included in their lifestyles and culture, through which they provide solutions to situations that affect their health. These models of traditional health are insufficient to prevent and treat a large part of the prevalent chronic pathologies that affect the community, so it is necessary to include the Western medical system within their cosmovision.7

Therefore, it is essential to implement articulated healthcare programs that favor populations with difficult access and thus achieve the prevention and/or early detection of NCDs. For primary prevention of CKD, risk factors, such as hypertension and diabetes10 must be identified, and a systematized follow-up11 that includes etiological diagnosis, adequate control of blood pressure, albuminuria, blockade of the renin-angiotensin system, metabolic control and nutritional and lifestyle modifications must be established.12,13 Therefore, the objective of the present study is to characterize the factors associated with renal health in Colombian indigenous communities.

Materials and methods

Observational exploratory cross-sectional study conducted in indigenous population by the Colombian Association of Nephrology and Arterial Hypertension through an interdisciplinary field team. Data were gathered in part from the indigenous reservations of Colombia, which are recognized as socio-political legal institutions of a special nature and are constituted by one or more indigenous communities; they also have a collective property title that gives them guarantees of private property and are governed according to their own regulatory system

Sample

The population was selected in the field and was made up of indigenous people of 16 ethnic groups distributed throughout Colombia. According to the 2018 census,14 the country currently has an indigenous population of 1,905,617 inhabitants, and 6 sub-regions that host 102 indigenous peoples.

The research was conducted in situ in an exploratory manner and all individuals over 18 years of age who were present when the information was collected and who were available for blood pressure measurement and laboratory tests were included. Those who did not belong to an indigenous community were excluded.

Procedure

The data were collected during the month of March 2019 through an individual interview that lasted 30 minutes. All participants signed the informed consent.

Instrument

An instrument for data collection was constructed based on the study conducted by García-Trabanino et al.15 in Mexico, and whose validity was verified by a panel of experts that reviewed and determined the pertinent questions, debugging those that caused confusion. The questionnaire used was the one approved by the Scientific Committee of the Colombian Association of Nephrology for the national campaign entitled Indigenous Kidney Health - World Kidney Day 2019.

Analysis

Once the records were obtained, a database was constructed, a statistical summary was made with the measures of central tendency and the association between variables was evaluated using the Chi-square test (χ^2). The data were analyzed using the SPSS V.25 software.

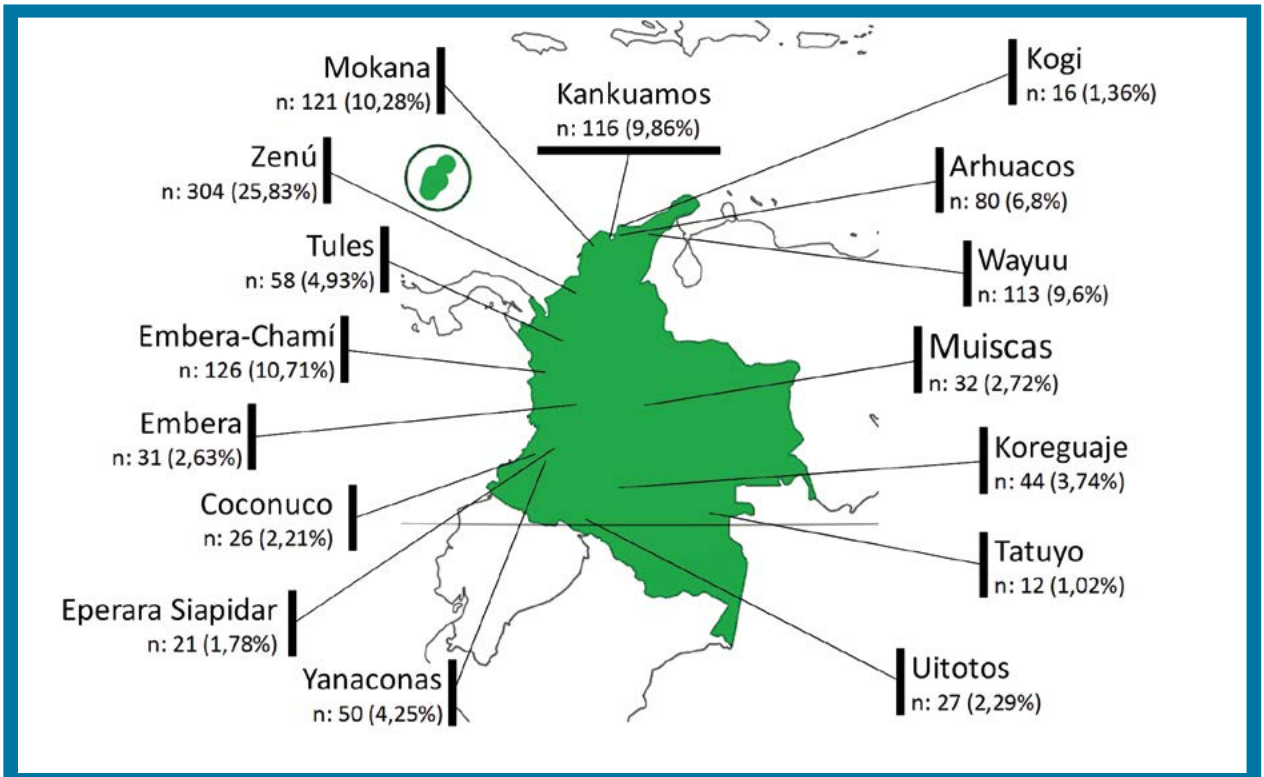

Figure 1 Distribution of the indigenous peoples who participated in the study Source: Own elaboration.

Results

Sociodemographic characterization

The total studied population was 1177 indigenous people belonging to 16 ethnic groups distributed throughout Colombia. The ethnic groups were: Zenú (25.83%), Emberas-Chami (10.71%), Mokana (10.28%), Kankuamos (9.86%), Wayuu (9.6%), Arhuacos (6.8%), Tules (4.93%), Yanaconas (4.25%), Koreguaje (3.74%), Muiscas (2.72%), Emberas (2.63%), Uitotos (2.29%), Coconuco (2.21%), Eperara Siapidar (1.78%), Kogi (1.36%) and Tatuyo (1.02%). As for the housing location, 73% of the population lived in rural areas (Figure 1).

Nota: en los porcentajes de la Figura 1 favor cambiar las comas por puntos.

Figure 1 Distribution of the indigenous peoples who participated in the study
Source: Own elaboration.

49.8% of the participants were men and the overall average age was 43 ± 17 years (45 ± 18 for men and 41 ± 16 for women); the minimum age was 18 years and the maximum was 95. According to the life cycle, the most representative age range was between 27 and 59 years, with 59.8% of the total of interviewees. The relationship between sex and age range was significant (χ^2=9.927; p=0.0070), which demonstrated that women were mostly represented in the ranges under 60 years.

Regarding education, 34.5% of the interviewees, without distinction of sex, said they had no studies (p = 0.062), 26.3% had completed primary basic education; 24.8% had finished high school, 9% had tertiary studies, 4.3% had university studies and 1% had completed postgraduate studies. A significant difference between the sexes was found for higher education (technician, technologist, university and postgraduate) in favor of women (p = 0.0000).

17 groups of work activities were identified, but 50% of these were concentrated in two groups with a marked difference between sexes by activity: household (33.39%) and farming and agriculture (16.4%). 94% of the people devoted to household chores were women and 88% of those

who worked in farming activities and agriculture were men. In decreasing order, other activities identified were: construction labor (4.5%), manufacturing and sale of handcrafts (4.33%), general services (3.57%) and healthcare (3.14%); this allowed us to observe that the activities that had to do with the management of personnel were carried out by women and those that required the use of force, handling of weapons and transportation were carried out by men. It is important to highlight that 15% of the interviewed population said they were unemployed.

Sanitary characterization

94.1% of the indigenous participants in the study were affiliated to the General System of Social Security in Health (SGSSS, by its acronym in Spanish) in one of its regimes (contributory or subsidized). Having studied the association between the housing location (rural or near the urban area) and the regime of the SGSSS, it was determined that people who lived in the rural area were affiliated to the SGSSS through the subsidized regime in a significant proportion (χ^2=6.54; p= 0.010545).

39% of the population had overweight and 16%, obesity. The latter was mostly associated with women (χ^2=19.146; p=0.0003) and the age range was between 27 and 59 years for both sexes, corresponding to the adult life cycle. (χ^2=98.040; p=0.0000). No association was found between housing location and body mass index (χ^2=2.447; p=0.4849).

Regarding diabetes, 1.4% of the respondents said they had been diagnosed at some time and 1.7% did not remember if they had been told they had this disease. Of those diagnosed, only 5 individuals were under treatment and, of them, 1 was insulinized. In 29 individuals, a postprandial glucometry >140 mg/dL was determined, which, according to the guidelines of the American Diabetes Association, would be diagnosed as diabetes and would increase the percentage of diabetic respondents to 4.18%.

As for arterial hypertension (AHT), 10.4% stated that they had a confirmed diagnosis and 6.46% did not know if they suffered from this condition. Among those who had a confirmed diagnosis, 35% had no schematized treatment. In addition, of the total population studied, 38.5% had a hypertensive relative in the first degree of consanguinity. When the measurement in situ was performed, 40% of those who said they did not suffer from AHT had blood pressure levels >130/85 mmHg.

Characterization of kidney health

3.2% of the individuals studied said they were patients with CKD, 0.17% was on hemodialysis renal replacement therapy and 15.9% said they had recurrent urinary tract infections. Likewise, 9.6% had been diagnosed with lithiasis, 0.17% with polycystic kidney disease and 0.08% with lupus nephritis. Of the total population, 6.2% had relatives with CKD, and, when the results of proteinuria and hematuria were evaluated, 8.8% had the first one and 4.2%, the second.

Studying other risk factors, 45.1% consumed alcohol frequently (≥2 times per month) and about 14.4% smoked. Among those who had activities related to farming and agriculture, 45.4% (p <0.039) had direct contact with chemicals.

When inquiring on hydration habits, 63.6% drank only water, 12% some type of infusion (coffee, sugar cane (panela) or rice or corn water) or beverages derived mainly from the non-distilled fermentation of cereals or tubers (Corn, rice, millet and cassava chicha) and 24.4% water and carbonated drinks, synthetic soft drinks, processed juices, chichas and/or infusions.

Accessibility to healthcare services

Although 94.1% of the studied population was affiliated to the SGSSS, 52.6% mentioned that it was difficult or very difficult to access the service and attributed to this that more than one third of the population (386 individuals) had not had a medical check-up in the past two years and that 17.1% had not consulted in a longer period. Of those who consulted in the last 12 months (3.9%), only 1.6% (n=19) had at least one specialized consultation, 1.1% (n=13) had a consultation with a nephrologist and 2.6% (n=31) with a specialist in cardiology.

When exploring the correspondence analysis with a 95% confidence ellipse (Figure 2), the possible association between the perception of access to healthcare and sex and risk factors, it was observed that the "Nothing difficult" factor was related to the male gender and the hypercholesterolemia comorbidity; in addition, although diabetes and nearness to urban areas were not within the confidence interval, they were in the same dispersion plane, which shows that there is proximity between these two variables. On the contrary, the "Difficult" or "Very difficult" factors were significantly associated with rural areas, female sex and hypertension comorbidity.

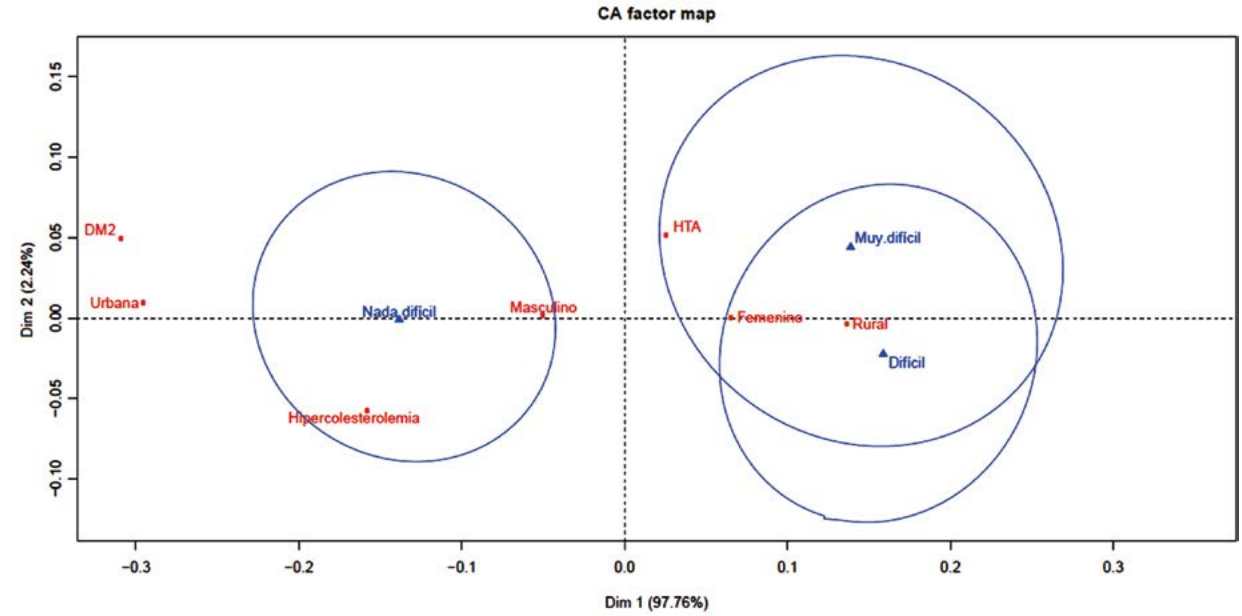

Figure 2. Correspondence analysis with 95% confidence ellipse of sociodemographic factors, access to health care and comorbidities in the indigenous populations of Colombia.
Source: Own elaboration.

Discussion

Traditionally, the attention, promotion, prevention and access to health care for the indigenous groups have been inadequate and deficient, leading to the progression of the diseases and the appearance of complications associated with them, particularly when it comes to pathologies that are not characteristic of these populations.16 Similarly, migration and intervention in these communities have led them to change their traditions and opt for urbanized lifestyles, with sedentary lifestyle and unhealthy eating habits that in turn condition the occurrence of the so called chronic non-communicable diseases, such as: hypertension, diabetes, obesity, psychosocial disorders (including behavioral disorders associated with excessive alcohol and drug use), among others.17,18

In the present study, although 94.1% of the population was included in some health coverage regime, it was evidenced that the indigenous people lost diagnostic opportunities; at this point it is important to note that 52.6% of the participants considered that access to health control was difficult or very difficult, which is reflected in the fact that 32.7% had not visited a doctor in the past two years, 17.1% had not attended a medical check-up in more than two years and that only 1.6% had managed to access to specialized medicine. The main justification heard was the distance of the consultation sites and, therefore, it was difficult for them to have the exams on time. These findings have also been documented in the literature and have been linked to the management of diseases with multiple etiologies, such as oncological,19 psychiatric, 20 chronic noncommunicable and infectious.22

Similar to the findings of this research, Hautecoeur et al.23 found in indigenous populations from Guatemala that the main problem of access to health care also lies in the difficulty of moving to distant sites of medical care.

In terms of work activity, 33.4% of the studied population was dedicated to household chores, and of them, 94% were women, which is consistent with what was reported in the population register of the National Indigenous Organization of Colombia, where the proportion regarding the occupation is 3 women for every 2 men,24 and with was found in other indigenous peoples of the world.25 Meanwhile, men had a greater participation in activities related to farming and agriculture. For the activities of manufacture and sale of handicrafts, both sexes had equal participation, similar to what was reported in indigenous communities in South America.26

Only 26.3% and 24.9% of the population had attended programs of primary basic and secondary education, respectively, while 4.3%, had access to tertiary and university studies and 1% to postgraduate studies, data that coincide

with those reported for indigenous communities from Mexico between 2003 and 2006, with completion rates for basic primary education of 19.9%, high school of 17% and higher education of 4.7%.27,28 Among the results of the present investigation, stood out that the majority of higher studies were accomplished by women.

Regarding the risk factors for the development of CKD, it was found that 10.4% of the population studied had a diagnosis of arterial hypertension; however, high blood pressures were recorded in 40% of the remaining group. These findings exceed the percentage of hypertensive individuals reported for the general Colombian population, estimated at 22.8%;29 likewise, they are higher when compared with the evidence found in other indigenous populations such as the Asháninkas in Peru (14.5%),30 the Monteverde in Honduras (3.3%)31 and the Pehuenches in Chile (24.5%).32

In addition, it was found that the majority (52.2%) of those with a previous diagnosis of AHT had blood pressure levels outside the therapeutic goals and, even worse, they were not receiving medical treatment (35%); levels higher than those reported in 2019 by Essayagh et al.33 whose values were found above 70%, with the causes associated with these events being the lack of medication, family history and alcohol consumption, factors that were also found in the present screening.

The prevalence of diabetes was also evaluated in the present study, finding that 1.4% of the participants had a previous diagnosis and 0.4% were under some type of treatment, in addition, 2.46% had postprandial glycemia >200 mg/dL and, therefore, were classified as diabetics, with which it could be concluded that 4.18% of the population studied was diabetic.

In relation to the above, Phipps et al.34 in 2015 and Aghakhanian et al.35 in 2018 studied seven indigenous communities in Malaysia and they found that those located close to urban areas had an increased risk of cardiometabolic diseases, hypertension, diabetes, hypercholesterolemia and obesity, especially those that have changed their lifestyles for more urbanized and easily accessible diets. These findings were similar to those of the present investigation, in which the communities that lived near urban areas consumed more carbonated drinks, synthetic soft drinks, processed juices, chichas and/or infusions, compared to those located in rural areas. Aghakhanian et al.35 also indicated that these factors could predispose to kidney disease or metabolic syndrome.

Other modifiable risk factors for the development of kidney disease that were detected in the present study were overweight, present in 39%, and obesity, present in 16%, with a higher tendency of occurrence in women.

In research conducted in indigenous communities of Yucatan, Mexico, Asián-Chaves et al.36 found that 36.6% and 41.4% of women and 42.4% and 29.4% of men were overweight or obese, respectively; in the case of the women this was associated with a longer stay at home, which coincides with what was found in the present work.

In addition, it was found that 8.8% of the studied population presented proteinuria (a risk factor for CKD) below what is described for the general population when it is evaluated by means of urinalysis, being 17%, however, only 1.5% is associated with kidney disease.37,38 Likewise, the presence of hematuria was studied, which was present in 4.2% of the population, figures that for the world population are between 0.5% and 2%, with variation according to age and population series, reaching up to 20% in people over 50 years; in the latter population, the presence of this condition may be associated with kidney disease.39,40

Conclusions

Some of the main conditions responsible for the development of CKD are hypertension and diabetes, and it has been observed that their incidence is 1.5 times higher in ethnic minorities in developed countries. To this is added poverty, which has become an important risk factor for its onset, since it directly influences access and provision of health services, thus generating a delay in the diagnosis of the disease and, therefore, a greater progression thereof.4,41,42.

The absence of systematic promotion and prevention programs aimed at nephroprotection in the general and at-risk population has made the real situation unknown. Likewise, the lack of access to health services, in many cases due to cultural reasons; the absence of nearby healthcare facilities, and the lack of specialized health personnel make it difficult to determine the incidence and prevalence rate of kidney disease in indigenous communities,43 so it is necessary to conduct studies that reveal these values and thus perform intervention in health issues In these populations.

Conflict of interest

None declared by the authors.

Funding

None declared by the authors.

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1 Evaluation of factors associated with kidney disease in Colombian indigenous communities, Mokaná community from Tubará, Colombia. Descriptive study

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Introduction. In Latin America, the existence of 45 million people belonging to the indigenous population was described in 2010, and in 2013 it was possible to identify 826 indigenous peoples; Colombia, with 102 peoples, ranks second in number of indigenous inhabitants in this region of the world.

According to the High Cost Account, 12,895 individuals belonging to a Colombian indigenous community suffer from chronic kidney disease (CKD) or any of its precursors (arterial hypertension and diabetes mellitus); 92% of this population is affiliated to some indigenous health care provider (EPS, for its acronym in Spanish) and 99.4% belongs to the subsidized regime.

Objective. To describe the sociodemographic and clinical characteristics, exposure factors and healthcare regime in the Mokaná indigenous community from the municipality of Tubará, Colombia. (Figure 1)

Materials and methods. It was conducted an observational descriptive cross-sectional study, in which a validated survey was applied to collect sociodemographic and clinical data, exposure factors, and healthcare regime. The participants signed the informed consent and we proceeded to carry out the physical examination in which we measured anthropometric data, blood pressure, glucometry, hematuria and proteinuria with reactive strips.

Figure 1. Georeferencing of the Mokaná community. Source: Google Earth.

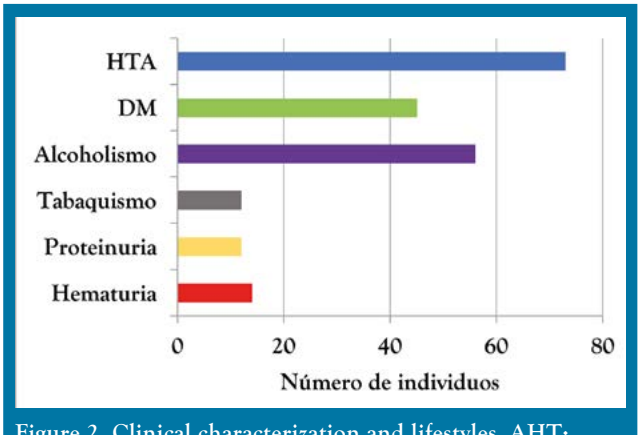

Figure 2. Clinical characterization and lifestyles. AHT: arterial hypertension, DM: diabetes mellitus. Source: Own elaboration.

Table 1. Sociodemographic characterization of the Mokaná community from Tubará, Colombia.

Characteristics		Female	Male	Total
Age range	Youth (18-26 years)	13 (15.66%)	10 (23.81%)	23 (18.40%)
	Adulthood (27-59 years)	51 (61.45%)	15 (35.71%)	66 (52.80%)
	Older adult (60-75 years)	11 (13.25%)	12 (28.57%)	23 (18.40%)
	Elderly (76 years or more)	7 (8.43%)	4 (9.52%)	11 (8.80%)
	Not reported	1 (1.20%)	1 (2.38%)	2 (1.60%)
	Total	83 (100.00%)	42 (100.00%)	125 (100.00%)
Activity/Occupation	Household chores	55 (66.27%)	3 (7.14%)	58 (46.40%)
	Agriculture	0 (0.00%)	7 (16.67%)	7 (5.60%)
	Commerce	2 (2.41%)	4 (9.52%)	6 (4.80%)
	Unemployed	1 (1.20%)	5 (11.90%)	6 (4.80%)
	Student	5 (6.02%)	1 (2.38%)	6 (4.80%)
	Construction	0 (0.00%)	5 (11.90%)	5 (4.00%)
	Other	20 (24.10%)	17 (40.48%)	37 (29.60%)
	Total	83 (100.00%)	42 (100.00%)	125 (100.00%)
General system of Social Security	Not reported	9 (10.84%)	8 (19.05%)	17 (13.60%)
	Contributory	21 (25.30%)	9 (21.43%)	30 (24.00%)
	Subsidized	53 (63.86%)	25 (59.52%)	78 (62.40%)

Source: Own elaboration

Results. 125 individuals belonging to the Monaká indigenous community from Tubará participated in the study, of them, 25.6% had a presumptive diagnosis of prediabetes and 8.8% of diabetes mellitus; 5.6% had a confirmed diagnosis. 19.28% of the women had arterial hypertension (AHT) and 15.67% were at risk due to high systolic blood pressure (SBP) or diastolic blood pressure (DBP). Meanwhile, 21.43% of the men had AHT and 26.19% were at risk due to high SBP or DBP. 26.4% of the individuals had confirmed AHT, 28% had an antecedent of urinary tract infection and 10.4% had nephrolithiasis. 33.6% had overweight; 16.8%, obesity, and 11%, hematuria. Two new cases of nephrolithiasis and one of Class IV lupus nephritis were diagnosed.

Table 1 shows the sociodemographic characteristics of the population and Figure 2 shows their clinical characterization and lifestyles.

Conclusions. The application of a survey to characterize the situation of risk of kidney disease in indigenous communities allowed to generate an early opportunity for the diagnosis of comorbidities associated with kidney damage. However, it is necessary to implement longitudinal studies in order to study the behavior of kidney diseases and implement interventions in these populations.

2 Evaluation of factors associated with kidney disease in Colombian indigenous communities, Zenú community from Córdoba and Sucre, Colombia. Descriptive study

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Introduction. In Latin America, the existence of 45 million people belonging to the indigenous population was described in 2010, and in 2013 it was possible to identify 826 indigenous peoples; Colombia, with 102 peoples, ranks second in number of indigenous inhabitants in this region of the world.

According to the High Cost Account, 12,895 individuals belonging to a Colombian indigenous community suffer from chronic kidney disease (CKD) or any of its precursors (arterial hypertension and diabetes mellitus); 92% of this population is affiliated to some indigenous health care provider (EPS, for its acronym in Spanish) and 99.4% belongs to the subsidized regime.

Objective. To describe the sociodemographic and clinical characteristics, exposure factors and healthcare regime in the Zenú indigenous community from the municipalities of Córdoba and Sucre, Colombia. (Figure 1)

Materials and methods. It was conducted an observational descriptive cross-sectional study, in which a validated survey was applied to collect sociodemographic and clinical data, exposure factors, and healthcare regime. The participants signed the informed consent and we proceeded to carry out the physical examination in which we measured anthropometric data, blood pressure, glucometry, hematuria and proteinuria with reactive strips

Figure 1. Georeferencing of the Zenú community from Córdoba and Sucre, Colombia.Source: Google Earth.

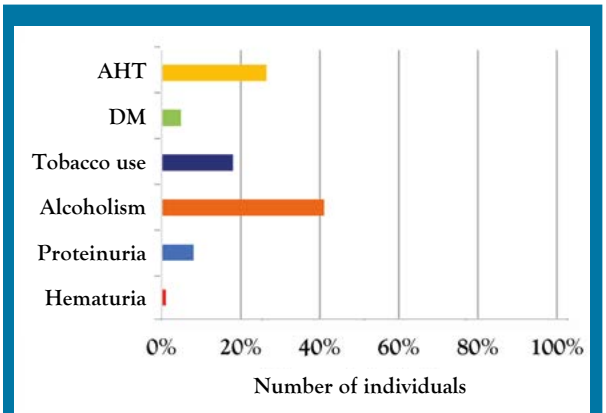

Figure 2. Clinical characterization and lifestyles. AHT: arterial hypertension, DM: diabetes *mellitus*. Source: Own elaboration

Table 1. Sociodemographic characterization of the Zenú community from Córdoba and Sucre, Colombia.

Characteristics		Female	Male	Total
Age range	Youth (18-26 years)	18 (14.29%)	8 (7.77%)	26 (11.35%)
	Adulthood (27-59 years)	85 (67.46%)	68 (66.02%)	153 (66.81%)
	Older adult (60-75 years)	12 (9.52%)	19 (18.45%)	31 (13.54%)
	Elderly (76 years or more)	11 (8.73%)	8 (7.77%)	19 (8.30%)
	Not reported	0 (0.00%)	0 (0.00%)	0 (0.00%)
	Total	126 (100.00%)	103 (100.00%)	229 (100.00%)
Activity/Occupation	Household chores	70 (55.56%)	1 (0.97%)	71 (31.00%)
	Agriculture	0 (0.00%)	28 (27.18%)	28 (12.23%)
	Commerce	14 (11.11%)	9 (8.74%)	23 (10.04%)
	Unemployed	12 (9.52%)	13 (12.62%)	25 (10.92%)
	Student	2 (1.59%)	3 (2.91%)	5 (2.18%)
	Construction	0 (0.00%)	7 (6.80%)	7 (3.06%)
	Other	28 (22.22%)	42 (40.78%)	70 (30.57%)
	Total	126 (100.00%)	103 (100.00%)	229 (100.00%)
General system of Social Security	Subsidized	104 (82.54%)	88 (85.44%)	192 (83.84%)
	Contributory	13 (10.32%)	8 (7.77%)	21 (9.17%)
	Special	1 (0.79%)	1 (0.97%)	2 (0.87%)
	Not reported	8 (6.35%)	6 (5.83%)	14 (6.11%)
	Total	126 (100.00%)	103 (100.00%)	229 (100.00%)

Source: Own elaboration

Results. 229 individuals belonging to the Zenú indigenous community from Córdoba and Sucre participated in the study, of them, 7.86% had a diagnostic presumptiom of prediabetes and 4.80% of diabetes mellitus; 2.18% had a confirmed diagnosis. 11.90% of the women had arterial hypertension (AHT) and
30.95% were at risk due to high systolic blood pressure (SBP) or diastolic blood pressure (DBP). Meanwhile, 14.56% of the men had AHT and 35.93% were at risk due to high SBP or DBP. 10.92% of the individuals had confirmed AHT, a figure that was 3 times higher than that reported in the Eighth Joint National Committee Guidelines. Likewise, it was found that 44% had an antecedent of urinary tract infection and 25.60% had nephrolithiasis. 78.40% had overweight and 40%, obesity.

Table 1 shows the sociodemographic characteristics of the population and Figure 2 shows their clinical characterization and lifestyles.

Conclusions. The application of a survey to characterize the situation of risk of kidney disease in indigenous communities allowed to generate an early opportunity for the diagnosis of comorbidities associated with kidney damage. However, it is necessary to implement longitudinal studies in order to study the behavior of kidney diseases and implement interventions in these populations.

3 Evaluation of factors associated with kidney disease in Colombian indigenous communities, Zenú community from Bolivar, Colombia. Descriptive study

Mercedes Alfaro[1,2], Jorge Coronado[2,3], Luis Puello[1,4], Álvaro Alvarado[5], Jean Villadiego[3], Dayana Arroyo[1], Rosario Asencio[1], María Velez-Verbel[4]

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According to the High Cost Account, 12,895 individuals belonging to a Colombian indigenous community suffer from chronic kidney disease (CKD) or any of its precursors (arterial hypertension and diabetes mellitus); 92% of this population is affiliated to some indigenous health care provider (EPS, for its acronym in Spanish) and 99.4% belongs to the subsidized regime.

Objective. To describe the sociodemographic and clinical characteristics, exposure factors and healthcare regime in the Zenú indigenous community from the municipality of Bolivar, Colombia. (Figure 1)

Materials and methods. It was conducted an observational descriptive cross-sectional study, in which a validated survey was applied to collect sociodemographic and clinical data, exposure factors, and healthcare regime. The participants signed the informed consent and we proceeded to carry out the physical examination in which we measured anthropometric data, blood pressure, glucometry, hematuria and proteinuria with reactive strips.

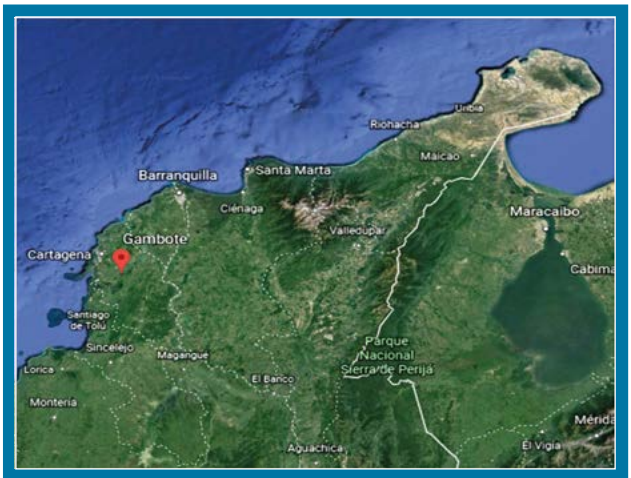

Figure 1. Georeferencing of the Zenú community from Bolivar, Colombia. Source: Google Earth.

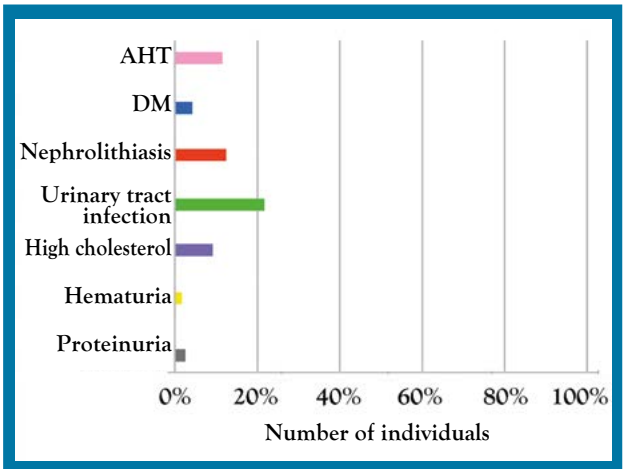

Figure 2. Clinical characterization and Lifestyles
AHT: arterial hypertension, DM: diabetes mellitus.
Source: Own elaboration.

Table 1. Sociodemographic characterization of the Zenú community from Bolivar, Colombia.

Characteristics		Female	Male	Total
Age range	Youth (18-26 years)	18 (14.29%)	8 (7.77%)	26 (11.35%)
	Adulthood (27-59 years)	85 (67.46%)	68 (66.02%)	153 (66.81%)
	Older adult (60-75 years)	12 (9.52%)	19 (18.45%)	31 (13.54%)
	Elderly (76 years or more)	11 (8.73%)	8 (7.77%)	19 (8.30%)
	Not reported	0 (0.00%)	0 (0.00%)	0 (0.00%)
	Total	126 (100.0%)	103 (100.00%)	229 (100.00%)
Activity/Occupation	Household chores	70 (55.56%)	1 (0.97%)	71 (31.00%)
	Agriculture	0 (0.00%)	28 (27.18%)	28 (12.23%)
	Commerce	14 (11.11%)	9 (8.74%)	23 (10.04%)
	Unemployed	12 (9.52%)	13 (12.62%)	25 (10.92%)
	Student	2 (1.59%)	3 (2.91%)	5 (2.18%)
	Construction	0 (0.00%)	7 (6.80%)	7 (3.06%)
	Other	28 (22.22%)	42 (40.78%)	70 (30.57%)
	Total	126 (100.00%)	103 (100.00%)	229 (100.00%)
General system of Social Security	Subsidized	104 (82.54%)	88 (85.44%)	192 (83.84%)
	Contributory	13 (10.32%)	8 (7.77%)	21 (9.17%)
	Special	1 (0.79%)	1 (0.97%)	2 (0.87%)
	Not reported	8 (6.35%)	6 (5.83%)	14 (6.11%)
	Total	126 (100.00%)	103 (100.00%)	229 (100.00%)

Source: Own elaboration

Results. 99 individuals belonging to the Zenú indigenous community from Bolivar participated in the study, of them, 15% had a presumptive diagnosis of prediabetes and 6% of diabetes mellitus. 6.45% of the women had a presumptive diagnosis of arterial hypertension (AHT) and 22.58% were at risk due to altered systolic blood pressure (SBP) or diastolic blood pressure (DBP). Meanwhile, 8.1% of the men had a presumptive diagnosis of AHT and 29.7% were at risk due to altered SBP or DBP. 11.1% recognized that they had AHT. 30.4% had overweight and 10%, obesity. Likewise, it was found that 28.8% of the participants ingested some alcoholic beverage and 11.2% smoked.

Table 1 shows the sociodemographic characteristics of the population and Figure 2 shows its clinical characterization and lifestyles.

Conclusions. The application of a survey to characterize the situation of risk of kidney disease in indigenous communities allowed to generate an early opportunity for the diagnosis of comorbidities associated with kidney damage. However, it is necessary to implement longitudinal studies in order to study the behavior of kidney diseases and implement interventions in these populations.

4

Evaluation of factors associated with kidney disease in Colombian indigenous communities, Arhuaco community, Colombia. Descriptive study

Gustavo Aroca-Martínez [1-4], Amalfi Charris [1,3], Andrés Soto[1,3], Sandra Echeverry [1,3], Genaro Gómez[1,3], Andrés Cadena-Bonfanti[1,2,3,4], Alberto Aroca[2], Henry González-Torres[2,4], Rafael Pérez[2], Mileidys Correa Monterrosa[2], Luis Cotes[2,4], Eddie Castro[2,4]

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Introduction. In Latin America, the existence of 45 million people belonging to the indigenous population was described in 2010, and in 2013 it was possible to identify 826 indigenous peoples; Colombia, with 102 peoples, ranks second in number of indigenous inhabitants in this region of the world.

According to the High Cost Account, 12,895 individuals belonging to a Colombian indigenous community suffer from chronic kidney disease (CKD) or any of its precursors (arterial hypertension and diabetes mellitus); 92% of this population is affiliated to some indigenous health care provider (EPS, for its acronym in Spanish) and 99.4% belongs to the subsidized regime.

Objective. To describe the sociodemographic and clinical characteristics, exposure factors and healthcare regime in the Arhuaco indigenous community from Colombia. (Figure 1)

Materials and methods. It was conducted an observational descriptive cross-sectional study, in which a validated survey was applied to collect sociodemographic and clinical data, exposure factors, and healthcare regime. The participants signed the informed consent and we proceeded to carry out the physical examination in which we measured anthropometric data, blood pressure, glucometry, hematuria and proteinuria with reactive strips.

Figure 1. Georeferencing of the Arhuaco community, Colombia. Source: Google Earth.

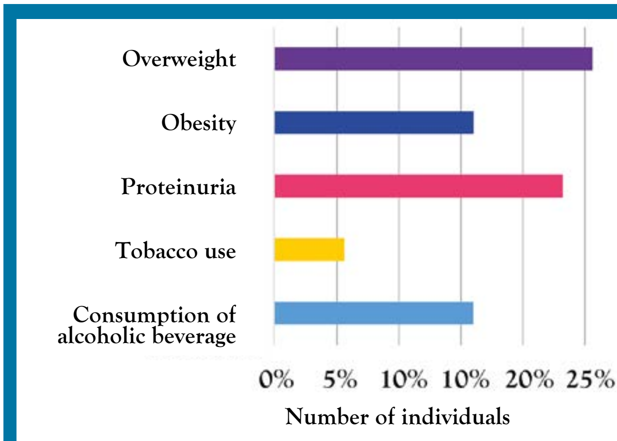

Figure 2. Clinical characterization and lifestyles. Source: Own elaboration.

Results.

88 individuals belonging to the Arhuaco indigenous community from Colombia participated in the study, of them, 15.9% had a presumptive diagnosis of prediabetes and 5.6% of diabetes mellitus. 4.8% of the women had a presumptive diagnosis of arterial hypertension (AHT) and 30.6% were at risk due to altered systolic blood pressure (SBP) or diastolic blood pressure (DBP). Meanwhile, 42.3% of the men were at risk due to altered SBP or DBP. 12.5% of the individuals recognized that they had AHT.

Table 1 shows the sociodemographic characteristics of the population and Figure 2 shows their clinical characterization and lifestyles.

Conclusions.

The application of a survey to characterize the situation of risk of kidney disease in indigenous communities allowed to generate an early opportunity for the diagnosis of comorbidities associated with kidney damage. However, it is necessary to implement longitudinal studies in order to study the behavior of kidney diseases and implement interventions in these populations.

Table 1. Sociodemographic characterization of the Arhuaco community Colombia.

Characteristics		Female	Male	Total
Age range	Youth (18-26 years)	8 (12.90%)	7 (26.92%)	15 (17.05%)
	Adulthood (27-59 years)	37 (59.68%)	14 (53.85%)	51 (57.95%)
	Older adult (60-75 years)	13 (20.97%)	2 (7.69%)	15 (17.05%)
	Elderly (76 years or more)	3 (4.84%)	3 (11.54%)	6 (6.82%)
	Child (0-17 years)	1 (1.61%)	0.00%	1 (1.14%)
	Total	62 (100.00%)	26 (100.00%)	88 (100.00%)
Activity/Occupation	Household chores	32 (51.61%)	0 (0.00%)	32 (36.36%)
	Agriculture	1 (1.61%)	12 (46.15%)	13 (14.77%)
	Commerce	10 (16.13%)	3 (11.54%)	13 (14.77%)
	Unemployed	6 (9.68%)	2 (7.69%)	8 (9.09%)
	Student	1 (1.61%)	2 (7.69%)	3 (3.41%)
	Construction	0.00%	0.00%	0 (0.00%)
	Other (n:18)	12 (19.35%)	7 (26.92%)	19 (21.59%)
	Total	62 (100.00%)	26 (100.00%)	88 (100.00%)
General system of Social Security	Subsidized	47 (75.81%)	19 (73.08%)	66 (75.00%)
	Contributory	5 (8.06%)	0 (0.00%)	5 (5.68%)
	Special	7 (11.29%)	6 (23.08%)	13 (14.77%)
	Not reported	3 (4.84%)	1 (3.85%)	4 (4.55%)
	Total	62 (100.00%)	26 (100.00%)	88 (100.00%)

Source: Own elaboration

5 Evaluation of factors associated with kidney disease in Colombian indigenous communities, Kankuamos community from La Mina and Atanquez in Cesar, Colombia. Descriptive study.

Amalfi Charris[1,2], Andrés Soto[1,2], Javier Morón[1,2], Sandra García[2,3], Gustavo Aroca-Martínez [1,2,4,5], Andrés Cadena-Bonfanti[1,2,4,5], Zilac Espitaleta[2,3,5], Alberto Aroca[2], Carlos Coronel[4,5], Henry González-Torres[4,5], Rafael V. Pérez[1,5] Mileidys Correa Monterrosa[5], Andersson Acuña-Freyte[4,5], William Peña[4,5], Luis Cotes[4,5], Álvaro Martínez [4,5], Eddie Castro [4,5], Martha Potes[2], María Lucrecia Luna[2], Elizabeth Ardila[2]

[1] Colombian Association of Nephrology and Arterial Hypertension, Bogotá, Colombia.

[2] Nefrocaribe, Barranquilla, Colombia.

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[5] Clínica de la Costa, Barranquilla, Colombia.

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Introduction. In Latin America, the existence of 45 million people belonging to the indigenous population was described in 2010, and in 2013 it was possible to identify 826 indigenous peoples; Colombia, with 102 peoples, ranks second in number of indigenous inhabitants in this region of the world.

According to the High Cost Account, 12,895 individuals belonging to a Colombian indigenous community suffer from chronic kidney disease (CKD) or any of its precursors (arterial hypertension and diabetes mellitus); 92% of this population is affiliated to some indigenous health care provider (EPS, for its acronym in Spanish) and 99.4% belongs to the subsidized regime.

Objective. To describe the sociodemographic and clinical characteristics, exposure factors and healthcare regime in the Kankuamos indigenous community from the reservations of La Mina and Atanquez in Cesar, Colombia. (Figure 1)

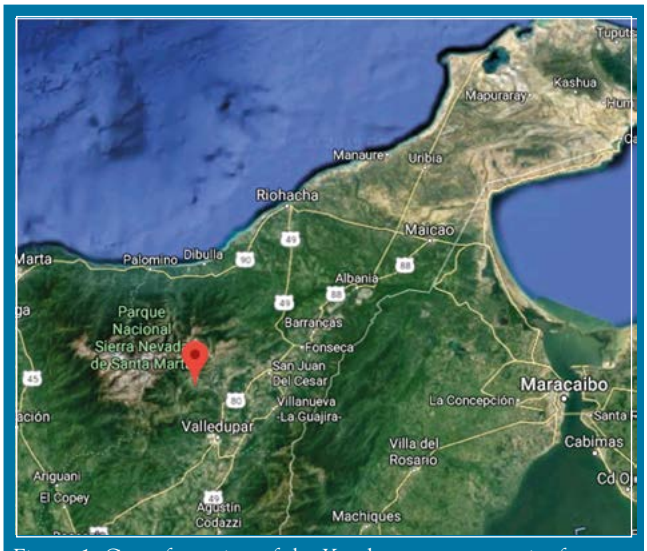

Figure 1. Georeferencing of the Kamkuanos community from the reservations of La Mina and Atanquez in Cesar, Colombia Source: Google Earth.

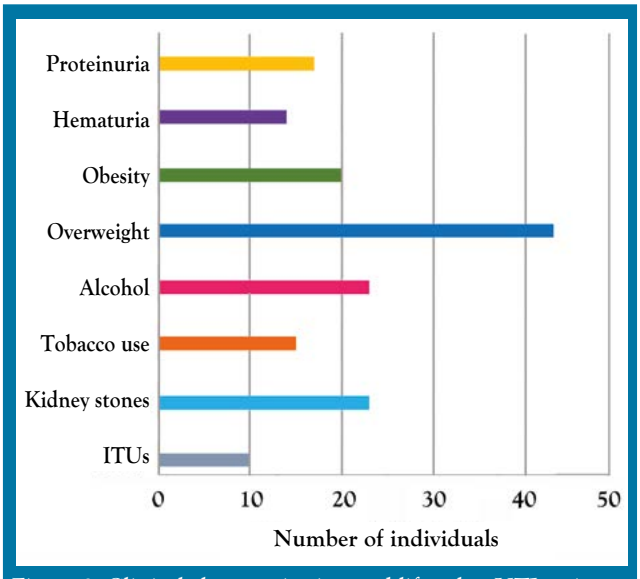

Figure 2. Clinical characterization and lifestyles. UTI: urinary tract infection. Source: Own elaboration

Table 1. Sociodemographic characterization of the Kankuamos indigenous community from the reservations of La Mina and Atanquez in Cesar, Colombia.

Characteristics		Female	Male
Age range	Youth (18-26 years)	5 (6.58%)	3 (6.12%)
	Adulthood (27-59 years)	45 (59.21%)	30 (61.22%)
	Older adult (60-75 years)	20 (26.32%)	14 (28.57%)
	Elderly (76 years or more)	1 (1.32%)	1 (2.04%)
	Not reported	5 (6.58%)	1 (2.04%)
	Total	76 (100.00%)	49 (100.00%)
Activity/Occupation	Household chores	36 (47.37%)	1 (2.04%)
	Agriculture	2 (2.63%)	35 (71.43%)
	Commerce	21 (27.63%)	3 (6.12%)
	Unemployed	8 (10.53%)	1 (2.04%)
	Student	2 (2.63%)	0 (0.00%)
	Construction	0 (0.00%)	3 (6.12%)
	Other	7 (9,21%)	6 (12.24%)
	Total	76 (100.00%)	49 (100.00%)
General system of Social Security	Subsidized	48 (63.16%)	41 (83.67%)
	Contributory	7 (9.21%)	1 (2.04%)
	Special	14 (18.42%)	7 (14.29%)
	Not reported	7 (9.21%)	0 (0.00%)
	Total	76 (100.00%)	49 (100.00%)

Source: Own elaboration

Materials and methods. It was conducted an observational descriptive cross-sectional study, in which a validated survey was applied to collect sociodemographic and clinical data, exposure factors, and healthcare regime. The participants signed the informed consent and we proceeded to carry out the physical examination in which we measured anthropometric data, blood pressure, glucometry, hematuria and proteinuria with reactive strips.

Results. 125 individuals belonging to the Kamkuanos indigenous community from the reservations of La Mina and Atanquez participated in the study, of them, 15.2% had a presumptive diagnosis of prediabetes and 2.4% of diabetes mellitus; 5.6% recognized that they had this diagnosis. 30.26% of the women had a presumptive diagnosis of arterial hypertension (AHT) and 27.64% were at risk due to altered systolic blood pressure (SBP) or diastolic blood pressure (DBP). Meanwhile, 20.41% of the men had a presumptive diagnosis of AHT and 59.18% were at risk due to altered SBP or DBP. 16.8% of the individuals recognized that they had AHT.

Table 1 shows the sociodemographic characteristics of the population and Figure 2 shows their clinical characterization and lifestyles.

Conclusions. The application of a survey to characterize the situation of risk of kidney disease in indigenous communities allowed to generate an early opportunity for the diagnosis of comorbidities associated with kidney damage. However, it is necessary to implement longitudinal studies in order to study the behavior of kidney diseases and implement interventions in these populations.

6 Evaluation of factors associated with kidney disease in Colombian indigenous communities, Kogui community from Magdalena, Colombia. Descriptive study.

Sandra Echeverri[1,2], Genaro Gómez[1,2], María Lucrecia Luna[1,2], Yusir Sierra[1,2], Henry González-Torres [1,2], Mileidys Correa Monterrosa[2], Rafael V. Pérez[1,2], Gustavo Aroca-Martínez [1,2], Shirly Tejeda[1,2], Carlos Campos [1,2], Eric Licona [1,2].

[1] Department of Nephrology, School of Medicine, Simon Bolivar University (Universidad Simón Bolívar), Barranquilla, Colombia.

[2] Clínica de la Costa, Barranquilla, Colombia.

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Introduction. In Latin America, the existence of 45 million people belonging to the indigenous population was described in 2010, and in 2013 it was possible to identify 826 indigenous peoples; Colombia, with 102 peoples, ranks second in number of indigenous inhabitants in this region of the world.

According to the High Cost Account, 12,895 individuals belonging to a Colombian indigenous community suffer from chronic kidney disease (CKD) or any of its precursors (arterial hypertension and diabetes mellitus); 92% of this population is affiliated to some indigenous health care provider (EPS, for its acronym in Spanish) and 99.4% belongs to the subsidized regime.

Objective. To describe the sociodemographic and clinical characteristics, exposure factors and healthcare regime in the Kogui indigenous community from the department of Magdalena, Colombia. (Figure 1)

Materials and methods. It was conducted an observational descriptive cross-sectional study, in which a validated survey was applied to collect sociodemographic and clinical data, exposure factors, and healthcare regime. The participants signed the informed consent and we proceeded to carry out the physical examination in which we measured anthropometric data, blood pressure, glucometry, hematuria and proteinuria with reactive strips.

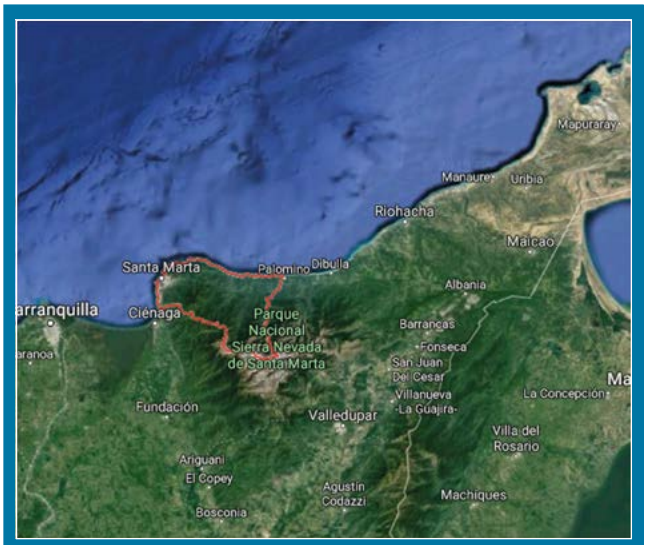

Figure 1. Georeferencing of the Kogui community from Magdalena, Colombia. Source: Google Earth.

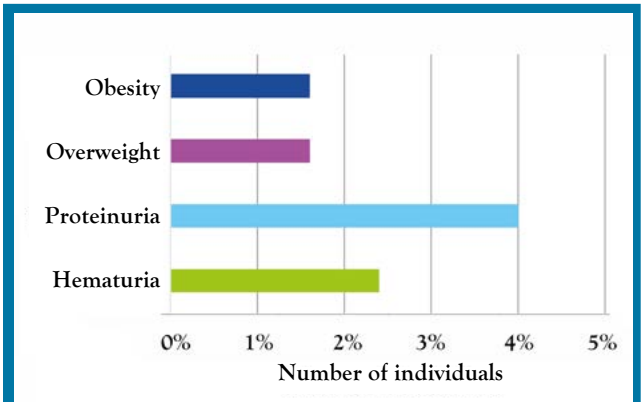

Figure 2. Clinical characterization and lifestyles. Source: Own elaboration.

Table 1. Sociodemographic characterization of the Kogui community from Magdalena, Colombia.

Characteristics		Female	Male	Total
Age range	Youth (18-26 years)	1 (16.67%)	1 (12.50%)	2 (14.29%)
	Adulthood (27-59 years)	2 (33.33%)	4 (50.00%)	6 (43.86%)
	Older adult (60-75 years)	0 (0.00%)	1 (12.50%)	1 (7.14%)
	Elderly (76 years or more)	0 (0.00%)	0 (0.00%)	0 (0.00%)
	Not reported	3 (50.00%)	2 (25.00%)	5 (35.71%)
	Total	6 (100.00%)	8 (100.00%)	14.(100.00%)
Activity/Occupation	Household chores	0 (0.00%)	0 (0.00%)	0 (0.00%)
	Agriculture	5 (83.33%)	5 (62.50%)	10 (71.43%)
	Commerce	0 (0.00%)	0 (0.00%)	0 (0.00%)
	Unemployed	0 (0.00%)	0 (0.00%)	0 (0.00%)
	Student	0 (0.00%)	1 (12.50%)	1 (7.14%)
	Construction	0 (0.00%)	0 (0.00%)	0 (0.00%)
	Other (n:18)	1 (16.67%)	2 (25.00%)	3 (21.43%)
	Total	6 (100.00%)	8 (100.00%)	14.(100.00%)
General system of Social Security	Subsidized	6 (100.00%)	8 (100.00%)	14.(100.00%)
	Contributory	0 (0.00%)	0 (0.00%)	5 (35.71%)
	Special	0 (0.00%)	0 (0.00%)	0 (0.00%)
	Not reported	0 (0.00%)	0 (0.00%)	0 (0.00%)
	Total	6 (100.00%)	8 (100.00%)	14.(100.00%)

Source: Own elaboration

Results. 14 individuals belonging to the Kogui indigenous community from Magdalena participated in the study, of them, 7.14% had a presumptive diagnosis of prediabetes and 28.57% of diabetes *mellitus*; 7.14% recognized that they had previously this diagnosis. 33.3% of the women had a diagnostic presumption of arterial hypertension (AHT) and 16.67% were at risk due to altered systolic blood pressure (SBP) or diastolic blood pressure (DBP). Meanwhile, 37.5% of the men had a presumptive diagnosis of AHT and the same percentage was at risk due to altered SBP or DBP. 57.14% of the individuals recognized that they had AHT. In addition, it was found that 2.4% of the surveyed population consumed some alcoholic beverage.

Table 1 shows the sociodemographic characteristics of the population and Figure 2 shows their clinical characterization and lifestyles.

Conclusions. The application of a survey to characterize the situation of risk of kidney disease in indigenous communities allowed to generate an early opportunity for the diagnosis of comorbidities associated with kidney damage. However, it is necessary to implement longitudinal studies in order to study the behavior of kidney diseases and implement interventions in these populations.

7 Evaluation of factors associated with kidney disease in Colombian indigenous communities, Embera community from Choco, Colombia. Descriptive study.

Marcelo Aguirre-Aguirre[1], Jennifer Alejandra Montoya-Valencia[2], Rafael V. Pérez[2,3], Henry González-Torres[2,3], Mileidys Correa-Monterrosa[3], Gustavo Aroca-Martínez[2,3]

[1] Nefro Choco, Quibdó, Colombia.

[2] Department of Nephrology, School of Medicine, Simon Bolivar University (Universidad Simón Bolívar), Barranquilla, Colombia.

[3] Clínica de la Costa, Barranquilla, Colombia

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Introduction. In Latin America, the existence of 45 million people belonging to the indigenous population was described in 2010, and in 2013 it was possible to identify 826 indigenous peoples; Colombia, with 102 peoples, ranks second in number of indigenous inhabitants in this region of the world.

According to the High Cost Account, 12,895 individuals belonging to a Colombian indigenous community suffer from chronic kidney disease (CKD) or any of its precursors (arterial hypertension and diabetes mellitus); 92% of this population is affiliated to some indigenous health care provider (EPS, for its acronym in Spanish) and 99.4% belongs to the subsidized regime.

Objective. To describe the sociodemographic and clinical characteristics, exposure factors and healthcare regime in the Embera indigenous community from the department of Choco, Colombia. (Figure 1)

Materials and methods. It was conducted an observational descriptive cross-sectional study, in which a validated survey was applied to collect sociodemographic and clinical data, exposure factors, and healthcare regime. The participants signed the informed consent and we proceeded to carry out the physical examination in which we measured anthropometric data, blood pressure, glucometry, hematuria and proteinuria with reactive strips.

Results. 23 individuals belonging to the Embera indigenous community from Choco, Colombia participated in the study, of them, 17.39% had a presumptive diagnosis of prediabetes. 7.69% of the women had a presumptive diagnosis of arterial hypertension and the same percentage was at

Figure 1. Georeferencing of the Embera community from Choco, Colombia.
Source: Google Earth.

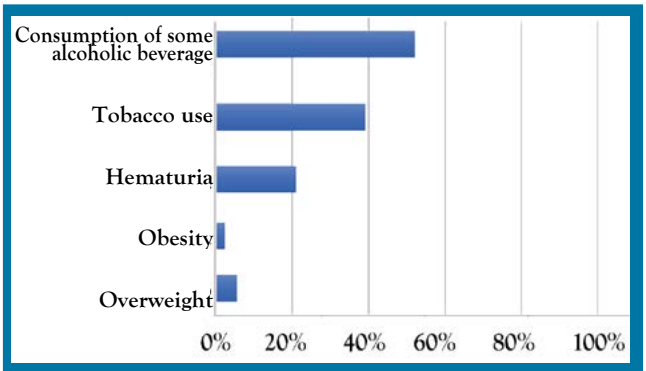

Figure 2. Clinical characterization and lifestyles.
Source: Own elaboration.

risk due to altered systolic blood pressure (SBP) or diastolic blood pressure (DBP). Meanwhile, 10% of the men were at risk due to altered SBP or DBP.

Table 1 shows the sociodemographic characteristics of the population and Figure 2 shows their clinical characterization and lifestyles.

Conclusions. The application of a survey to characterize the situation of risk of kidney disease in indigenous communities allowed to generate an early opportunity for the diagnosis of comorbidities associated with kidney damage. However, it is necessary to implement longitudinal studies in order to study the behavior of kidney diseases and implement interventions in these populations.

Table 1. Sociodemographic characterization of the Embera community from Chocó, Colombia.

Characteristics		Female	Male	Total
Age range	Youth (18-26 years)	5 (38.46%)	2 (20.00%)	7 (30.43%)
	Adulthood (27-59 years)	6 (46.15%)	7 (70.00%)	13 (56.52%)
	Older adult (60-75 years)	2 (15.38%)	1 (10.00%)	3 (13.04%)
	Elderly (76 years or more)	0 (0.00%)	0 (0.00%)	0 (0.00%)
	Not reported	0 (0.00%)	0 (0.00%)	0 (0.00%)
	Total	13 (100.00%)	10 (100.00%)	23 (100.00%)
Activity/Occupation	Household chores	9 (69.23%)	0 (0.00%)	9 (39.13%)
	Agriculture	1 (7.69%)	3 (30.00%)	4 (17.39%)
	Commerce	0 (0.00%)	0 (0.00%)	0 (0.00%)
	Unemployed	2 (15.38%)	0 (0.00%)	2 (8.70%)
	Student	0 (0.00%)	0 (0.00%)	0 (0.00%)
	Construction	0 (0.00%)	0 (0.00%)	0 (0.00%)
	Other	1 (7.69%)	7 (70.00%)	8 (34.78%)
	Total	13 (100.00%)	10 (100.00%)	23 (100.00%)
General system of Social Security	Subsidized	13 (100.00%)	5 (50.00%)	18 (78.26%)
	Contributory	0 (0.00%)	3 (30.00%)	3 (13.04%)
	Special	0 (0.00%)	1 (10.00%)	1 (4.35%)
	Not reported	0 (0.00%)	1 (10.00%)	1 (4.35%)
	Total	13 (100.00%)	10 (100.00%)	23 (100.00%)

Source: Own elaboration

8 Evaluation of factors associated with kidney disease in Colombian indigenous communities, Muisca community from Bogotá, Colombia. Descriptive study.

Cristóbal Buitrago[1], María Elizabeth Ardila[1], Claudia Acosta[1], Clímaco Andrés Jiménez [2,3], Jimena Cáceres[2,4], Luz Esthella González[2], Marcela Castellanos[2], Juan Cardenas[1], Andrea Escobar[3], Ana Marín-Marín[5], Alejandra Tijo[5], Erika Torrijos[3], Andrea Hincapié[3], Lorena Higuera[2], Natalia Bustos[3], Shirly Tejeda[6], Carlos Campos[6], Ana María Rubiano[4], Ximena Quijan [4], Yeimi Daniela Niño[4], Henry González-Torres[5,6], Rafael V. Pérez[5,6], Mileidys Correa-Monterrosa[5], Gustavo Aroca-Martínez[2,5,6]

[1] Colombian Association of Nephrology and Arterial Hypertension, Bogotá D.C., Colombia

[2] Colombian Association of Pediatric Nephrology, Bogotá D.C., Colombia.

[3] Department of Nephrology, School of Medicine, Nueva Granada Military University (Universidad Militar Nueva Granada), Bogotá D.C., Colombia.

[4] Department of Nephrology, School of Medicine, Sanitas University Foundation (Fundación Universitaria Sanitas) Bogotá D.C., Colombia.

[5] Clínica de la Costa, Barranquilla, Colombia.

[6] Department of Nephrology, School of Medicine, Simon Bolivar University (Universidad Simón Bolívar), Barranquilla, Colombia.

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Introduction. In Latin America, the existence of 45 million people belonging to the indigenous population was described in 2010, and in 2013 it was possible to identify 826 indigenous peoples; Colombia, with 102 peoples, ranks second in number of indigenous inhabitants in this region of the world.

According to the High Cost Account, 12,895 individuals belonging to a Colombian indigenous community suffer from chronic kidney disease (CKD) or any of its precursors (arterial hypertension and diabetes mellitus); 92% of this population is affiliated to some indigenous health care provider (EPS, for its acronym in Spanish) and 99.4% belongs to the subsidized regime.

Objective. To describe the sociodemographic and clinical characteristics, exposure factors and healthcare regime in the Muisca indigenous community from Bogotá, Colombia. (Figure 1)

Materials and methods. It was conducted an observational descriptive cross-sectional study, in which a validated survey was applied to collect sociodemographic and clinical data, exposure factors, and healthcare regime. The partici-

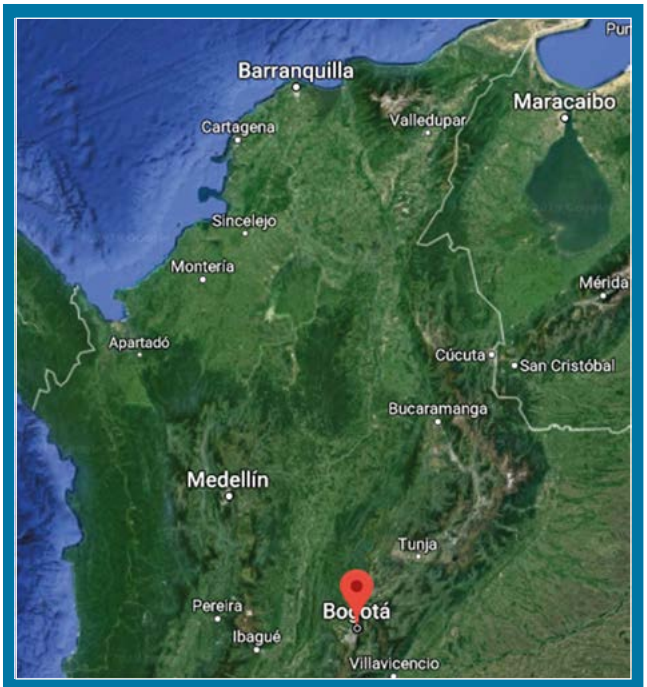

Figure 1. Georeferencing of the Muisca community from Bogotá, Colombia.
Source: Google Earth.

pants signed the informed consent and we proceeded to carry out the physical examination in which we measured anthropometric data, blood pressure, glucometry, hematuria and proteinuria with reactive strips.

Results. 23 individuals belonging to the Muisca indigenous community from Bogotá participated in the study, of them, 17.39% had a presumptive diagnosis of prediabetes. 7.69% of the women had a presumptive diagnosis of arterial hypertension and the same percentage was at risk due to altered systolic blood pressure (SBP) or diastolic blood pressure (DBP). Meanwhile, 10% of the men were at risk due to altered SBP or DBP.

Table 1 shows the sociodemographic characteristics of the population and Figure 2 shows their clinical characterization and lifestyles.

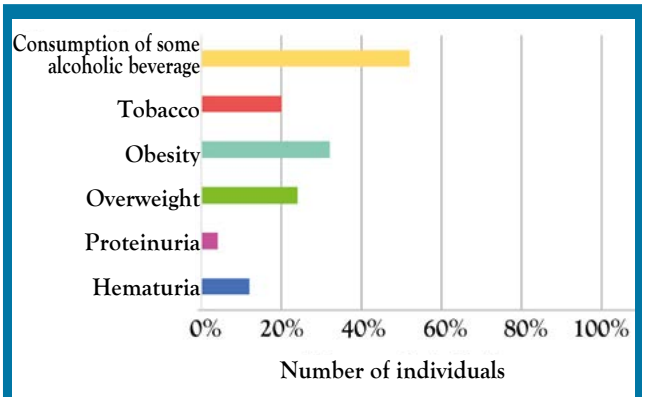

Figure 2. Clinical characterization and lifestyles.
Source: Own elaboration.

Conclusions. The application of a survey to characterize the situation of risk of kidney disease in indigenous communities allowed to generate an early opportunity for the diagnosis of comorbidities associated with kidney damage. However, it is necessary to implement longitudinal studies in order to study the behavior of kidney diseases and implement interventions in these populations.

Table 1. Sociodemographic characterization of the Muisca community from Bogotá, Colombia.

Characteristics		Female	Male	Total
Age range	Youth (18-26 years)	6 (35.29%)	0 (0.00%)	6 (24.00%)
	Adulthood (27-59 years)	8 (47.06%)	6 (75.00%)	14 (56.00%)
	Older adult (60-75 years)	2 (11.76%)	1 (12.50%)	3 (12.00%)
	Elderly (76 years or more)	1 (5.88%)	1 (12.50%)	2 (8.00%)
	Not reported	0 (0.00%)	0 (0.00%)	0 (0.00%)
	Total	17 (100.00%)	8 (100.00%)	25 (100.00%)
Activity/Occupation	Household chores	3 17.65(%)	0 (0.00%)	3 (12.00%)
	Agriculture	1 (5.88%)	1 (12.50%)	2 (8.00%)
	Commerce	1 (5.88%)	0 (0.00%)	1 (4.00%)
	Unemployed	4 (23.53%)	5 (62.50%)	9 (36.00%)
	Student	4 (23.53%)	0 (0.00%)	4 (16.00%)
	Construction	0 (0.00%)	0 (0.00%)	0 (0.00%)
	Other (n: 18)	4 (23.53%)	2 (25.00%)	6 (24.00%)
	Total	17 (100.00%)	8 (100.00%)	25 (100.00%)
General system of Social Security	Subsidized	9 (52.94%)	6 (75.00%)	15 (60.00%)
	Contributory	8 (47.06%)	2 (25.00%)	5 (20.00%)
	Special	0 (0.00%)	0 (0.00%)	0 (0.00%)
	Not reported	0 (0.00%)	0 (0.00%)	0 (0.00%)
	Total	17 (100.00%)	8 (100.00%)	25 (100.00%)

Source: Own elaboration

9 Evaluation of factors associated with kidney disease in Colombian indigenous communities, Uitoto community from Meta, Colombia. Descriptive study.

Iván Rodrigo Nieto-González[1], Alexander Leal-Pedraza[1], Henry González-Torres[2,3], Rafael V.Pérez[2,3], Mileidys Correa-Monterrosa[3], Jennifer Alejandra Montoya-Valencia[2], Gustavo Aroca-Martínez[2,3]

[1] Colombian Association of Nephrology and Arterial Hypertension, Bogotá D.C., Colombia

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[3] Clínica de la Costa, Barranquilla, Colombia.

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Introduction. In Latin America, the existence of 45 million people belonging to the indigenous population was described in 2010, and in 2013 it was possible to identify 826 indigenous peoples; Colombia, with 102 peoples, ranks second in the number of indigenous inhabitants in this region of the world.

According to the High Cost Account, 12,895 individuals belonging to a Colombian indigenous community suffer from chronic kidney disease (CKD) or any of its precursors (arterial hypertension and diabetes mellitus); 92% of this population is affiliated to some indigenous health care provider (EPS, for its acronym in Spanish) and 99.4% belongs to the subsidized regime.

Objective. To describe the sociodemographic and clinical characteristics, exposure factors and healthcare regime in the Uitoto indigenous community from Meta, Colombia. (Figure 1)

Materials and methods. It was conducted an observational descriptive cross-sectional study, in which a validated survey was applied to collect sociodemographic and clinical data, exposure factors, and healthcare regime. The participants signed the informed consent and we proceeded to carry out the physical examination in which we measured anthropometric data, blood pressure, glucometry, hematuria and proteinuria with reactive strips.

Results. 33 individuals belonging to the Uitoto indigenous community from Meta participated in the study, of them, 15.15% had a presumptive diagnosis of prediabetes and 6% of diabetes mellitus. 6.25% of the women had a diagnostic presumption of arterial hypertension (AHT) and 62.5% were at risk due to altered systolic blood pressure (SBP) or

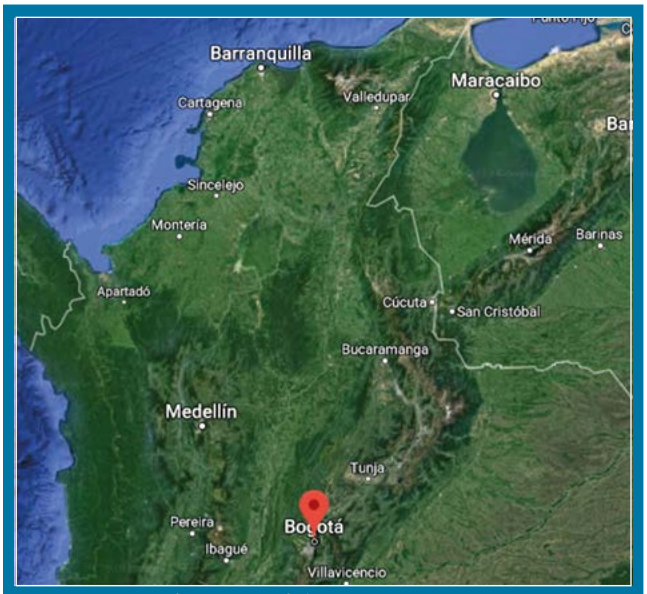

Figure 1. Georeferencing of the Uitoto community from Meta, Colombia. Source: Google Earth.

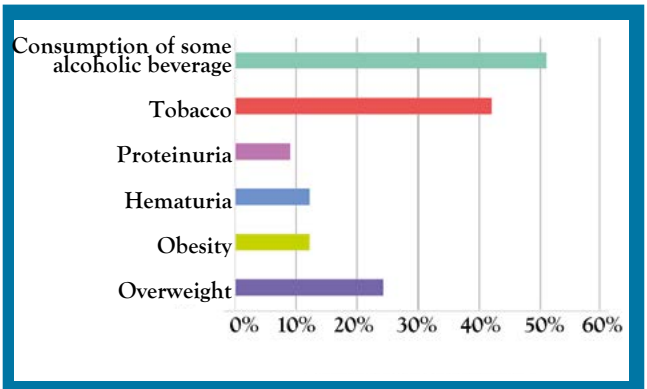

Figure 2. Clinical characterization and lifestyles. Source: Own elaboration.

diastolic blood pressure (DBP). Meanwhile, 17.65% of the men had a presumptive diagnosis of AHT and 70.6% were at risk due to altered SBP or DBP. 3% of the individuals recognized that they had AHT.

Table 1 shows the sociodemographic characteristics of the population and Figure 2 shows their clinical characterization and lifestyles.

Conclusions. The application of a survey to characterize the situation of risk of kidney disease in indigenous communities allowed to generate an early opportunity for the diagnosis of comorbidities associated with kidney damage. However, it is necessary to implement longitudinal studies in order to study the behavior of kidney diseases and implement interventions in these populations.

Table 1. Sociodemographic characterization of the Uitoto community from Meta, Colombia.

Characteristics		Female	Male	Total
Age range	Youth (18-26 years)	5 (31.25%)	4 (23.53%)	9 (27.27%)
	Adulthood (27-59 years)	10 (62.50%)	9 (52.94%)	19 (57-58%)
	Older adult (60-75 years)	1 (6.25%)	1 (5.88%)	2 (6.06%)
	Elderly (76 years or more)	0 (0.00%)	3 (17.65%)	3 (9.09%)
	Not reported	0 (0.00%)	0 (0.00%)	0 (0.00%)
	Total	16 (100.00%)	17 (100.00%)	33 (100.00%)
Activity/Occupation	Household chores	8 (50.00%)	0 (0.00%)	8 (24.24%)
	Agriculture	1 (6.25%)	6 (35.29%)	7 (21.21%)
	Commerce	0 (0.00%)	0 (0.00%)	0 (0.00%)
	Unemployed	1 (6.25%)	4 (23.53%)	5 (15.15%)
	Student	1 (6.25%)	3 (17.65%)	4 (12.12%)
	Construction	0 (0.00%)	1 (5.88%)	1 (3.03%)
	Other	5 (31.25%)	3 (17.65%)	8 (24.24%)
	Total	16 (100.00%)	17 (100.00%)	33 (100.00%)
General system of Social Security	Subsidized	10 (62.50%)	14 (82.35%)	24 (72.73%)
	Contributory	4 (25.00%)	2 (11,76%)	6 (18.18%)
	Special	0 (0.00%)	0 (0.00%)	0 (0.00%)
	Not reported	2 (12.50%)	1 (5.88%)	3 (9.09%)
	Total	16 (100.00%)	17 (100.00%)	33 (100.00%)

Source: Own elaboration

10 Evaluation of factors associated with kidney disease in Colombian indigenous communities, Wayuu community from La Guajira, Colombia. Descriptive study.

Gustavo Ahumada[1], Andrés Cadena-Bonfanti[2,3], Elva Pinto[1], Rafael Pérez[2,3], Henry González-Torres [2,3], Rafael V. Pérez[3], Mileidys Correa Monterrosa[3], Alex Domínguez-Vargas[3], Sandra Hernández[2,3], William Peña [2,3], Zuleima Peña[2,3], Rafael Isaza[2,3], María Vélez–Verbel[3], Álvaro Martínez [3], Andersson Acuña-Freyte[2,3], Gustavo Aroca-Martínez[2,3]

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Introduction. In Latin America, the existence of 45 million people belonging to the indigenous population was described in 2010, and in 2013 it was possible to identify 826 indigenous peoples; Colombia, with 102 peoples, ranks second in number of indigenous inhabitants in this region of the world.

According to the High Cost Account, 12,895 individuals belonging to a Colombian indigenous community suffer from chronic kidney disease (CKD) or any of its precursors (arterial hypertension and diabetes mellitus); 92% of this population is affiliated to some indigenous health care provider (EPS, for its acronym in Spanish) and 99.4% belongs to the subsidized regime.

Objective. To describe the sociodemographic and clinical characteristics, exposure factors and healthcare regime in the Wayuu indigenous community from La Guajira, Colombia. (Figure 1)

Materials and methods. It was conducted an observational descriptive cross-sectional study, in which a validated survey was applied to collect sociodemographic and clinical data, exposure factors, and healthcare regime. The participants signed the informed consent and we proceeded to carry out the physical examination in which we measured anthropometric data, blood pressure, glucometry, hematuria and proteinuria with reactive strips.

Results. 130 individuals belonging to the Wayuu indige-

Figure 1. Georeferencing of the Wayuu community from La Guajira, Colombia.
Source: Google Earth.

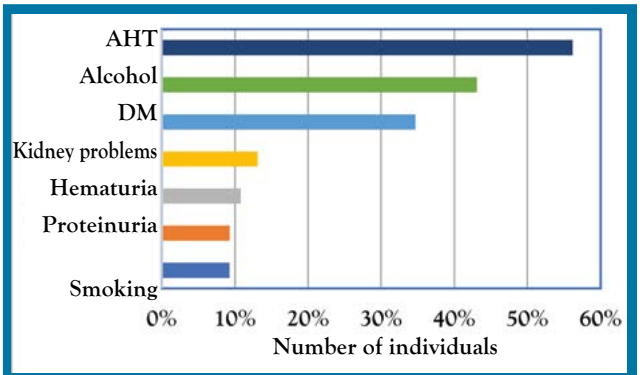

Figure 2. Clinical characterization and lifestyles. AHT: arterial hypertension, DM: diabetes *mellitus*. Source: Own elaboration.

nous community from La Guajira participated in the study, of them, 12.31% had a presumptive diagnosis of prediabetes and 6.15% of diabetes mellitus; 8.46% had a confirmed diagnosis. 4.60% of the women had arterial hypertension (AHT) and 18.39% were at risk due to high systolic blood pressure (SBP) or diastolic blood pressure (DBP). Meanwhile, 46.51% of the men were at risk due to high SBP or DBP. 11.54% of the individuals had confirmed AHT, 21.54% had an antecedent of urinary tract infection and 19.23% had nephrolithiasis. In addition, it was found that 33.85% had overweight and 20%, obesity.

Table 1 shows the sociodemographic characteristics of the population and Figure 2 shows their clinical characterization and lifestyles.

Conclusions. The application of a survey to characterize the situation of risk of kidney disease in indigenous communities allowed to generate an early opportunity for the diagnosis of comorbidities associated with kidney damage. However, it is necessary to implement longitudinal studies in order to study the behavior of kidney diseases and implement interventions in these populations.

Table 1. Sociodemographic characterization of the Wayuu community from La Guajra, Colombia

Characteristics		Female	Male	Total
Age range	Youth (18-26 years)	21 (24.14%)	8 (18.60%)	29 (22.31%)
	Adulthood (27-59 years)	50 (57.47%)	20 (46.51%)	70 (53.85%)
	Older adult (60-75 years)	15 (17.24%)	8 (18.60%)	23 (17.69%)
	Elderly (76 years or more)	0 (0.00%)	6 (13.95%)	6 (4.62%)
	Not reported	1 (1.15%)	1 (2.33%)	2 (1.54%)
	Total	87 (100.00%)	43 (100.00%)	130 (100.00%)
Activity/Occupation	Household chores	38 (43.68%)	3 (6.98%)	41 (31.54%)
	Handcrafts	16 (18.39%)	0 (0.00%)	16 (12.31%)
	Not reported	9 (10.34%)	6 (13.95%)	15 (11.54%)
	Unemployed	0 (0.00%)	9 (20.93%)	9 (6.92%)
	Commerce	2 (2.30%)	5 (11.63%)	7 (5.38%)
	Administration	4 (4.60%)	2 (4.65%)	6 (4.62%)
	Teacher	4 (4.60%)	2 (4.65%)	6 (4.62%)
	Education promoter	6 (6.90%)	0 (0.00%)	6 (4.62%)
	Other	8 (9.20%)	16 (37.21%)	24 (18.46%)
	Total	87 (100.00%)	43 (100.00%)	130 (100.00%)
General system of Social Security	Subsidized	72 (82.76%)	31 (72.09%)	103 (79.23%)
	Contributory	6 (6.90%)	6 (13.95%)	12 (9.23%)
	Not reported	9 (10.34%)	6 (13.95%)	15 (11.54%)
	Total	87 (100.00%)	43 (100.00%)	130 (100.00%)

Source: Own elaboration

11 Evaluation of factors associated with kidney disease in Colombian indigenous communities, Embera community from Pereira, Colombia. Descriptive study.

Jaime Torres[1]

[1] Department of Nephrology, School of Medicine, Simon Bolivar University (Universidad Simón Bolívar), Barranquilla, Colombia. Colombian Association of Nephrology and Arterial Hypertension, Bogotá D.C.,Colombia.

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Introduction. In Latin America, the existence of 45 million people belonging to the indigenous population was described in 2010, and in 2013 it was possible to identify 826 indigenous peoples; Colombia, with 102 peoples, ranks second in number of indigenous inhabitants in this region of the world.

According to the High Cost Account, 12,895 individuals belonging to a Colombian indigenous community suffer from chronic kidney disease (CKD) or any of its precursors (arterial hypertension and diabetes mellitus); 92% of this population is affiliated to some indigenous health care provider (EPS, for its acronym in Spanish) and 99.4% belongs to the subsidized regime.

Objective. To describe the sociodemographic and clinical characteristics, exposure factors and healthcare regime in the Embera indigenous community from Pereira, Colombia. (Figure 1)

Materials and methods. It was conducted an observational descriptive cross-sectional study, in which a validated survey was applied to collect sociodemographic and clinical data, exposure factors, and healthcare regime. The participants signed the informed consent and we proceeded to carry out the physical examination in which we measured anthropometric data, blood pressure, glucometry, hematuria and proteinuria with reactive strips.

Results. 131 individuals belonging to the Embera indigenous community from Pereira participated in the study, whose most frequent occupation was related with household chores Household chores (28%); 10% of the studied population practiced agriculture. Among the studied risk factors, 50% consumed at least some alcoholic beverage, 20% smoked, 33% had overweight and 17%, obesity. One out of 13 patients had hematuria.

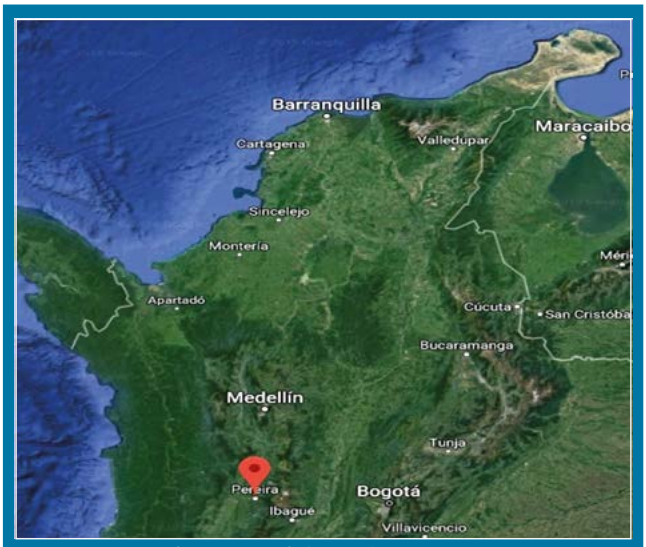

Figure 1. Georeferencing of the Embera community from Pereira, Colombia.
Source: Google Earth.

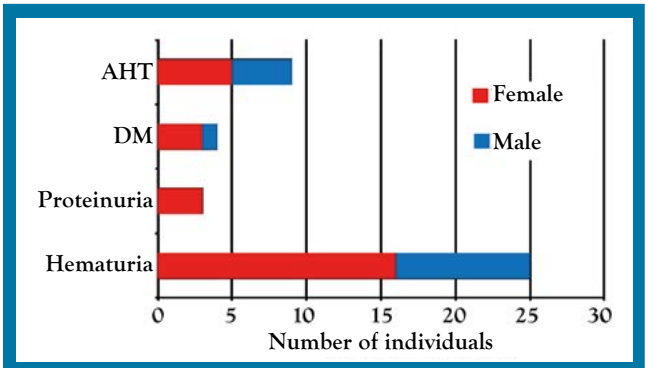

Figure 2. Clinical characterization and lifestyles.
AHT: arterial hypertension, DM: diabetes *mellitus*.
Source: Own elaboration.

Table 1 shows the sociodemographic characteristics of the population and Figure 2 shows their clinical characterization and lifestyles.

Conclusions. The application of a survey to characterize the situation of risk of kidney disease in indigenous communities allowed to generate an early opportunity for the diagnosis of comorbidities associated with kidney damage. However, it is necessary to implement longitudinal studies in order to study the behavior of kidney diseases and implement interventions in these populations.

Table 1. Sociodemographic characterization of the Embera community from Pereira, Colombia.

Characteristics		Female	Male	Total
Age range	Youth (18-26 years)	24 (37.50%)	21 (31.34%)	45 (34.35%)
	Adulthood (27-59 years)	29 (45.31%)	37 (55.22%)	66 (50.38%)
	Older adult (60-75 years)	6 (9.38%)	6 (8.96%)	12 (9.16%)
	Elderly (76 years or more)	2 (3.13%)	2 (2.99%)	4 (3.05%)
	Not reported	3 (4.69%)	1 (1.49%)	4 (3.05%)
Activity/Occupation	Household chores	36 (56.25%)	1 (1.49%)	37 (28.24%)
	Worker	0 (0.00%)	28 (41.79%)	28 (21.37%)
	Not reported	15 (23.44%)	7 (10.45%)	22 (16.79%)
	Student	8 (12.50%)	7 (10.45%)	15 (11.45%)
	Agriculture	0 (0.00%)	13 (19.40%)	13 (9.92%)
	Private security	0 (0.00%)	7 (10.45%)	7 (5.34%)
	Teachers	1 (1.56%)	3 (4.48%)	4 (3.05%)
	Community mother	3 (4.69%)	0 (0.00%)	3 (2.29%)
	Nursing assistant	0 (0.00%)	1 (1.49%)	1 (0.76%)
	Miscellaneous	1 (1.56%)	0 (0.00%)	1 (0.76%)
Antecedents	Arterial hypertension	13 (20.31%)	8 (11.94%)	21 (16.03%)
	Diabetes mellitus	3 (4.69%)	3 (4.48%)	6 (4.58%)
	Renal problems	1 (1.56%)	0 (0.00%)	1 (0.76%)
	Smoking	9 (14.06%)	18 (26.87%)	27 (20.61%)
	Alcohol	27 (42.19%)	34 (50.75%)	61 (46.56%)

Source: Own elaboration

12 Evaluation of factors associated with kidney disease in Colombian indigenous communities, Necoclí community from Antioquia, Colombia. Descriptive study.

Álvaro Mercado[1], Richard Baquero-Rodríguez[2], Ángela Castañeda[2], Shirly Tejeda[3,4], Rafael V. Pérez [3,4], Henry González-Torres[3,4], Mileidys Correa-Monterrosa[4], Lucrecia Luna[5],Elizabeth Ardila [5], Gustavo Aroca-Martínez[3,4]

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5 Colombian Association of Nephrology and Arterial Hypertension, Bogotá D.C., Colombia.

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Introduction. In Latin America, the existence of 45 million people belonging to the indigenous population was described in 2010, and in 2013 it was possible to identify 826 indigenous peoples; Colombia, with 102 peoples, ranks second in number of indigenous inhabitants in this region of the world.

According to the High Cost Account, 12,895 individuals belonging to a Colombian indigenous community suffer from chronic kidney disease (CKD) or any of its precursors (arterial hypertension and diabetes mellitus); 92% of this population is affiliated to some indigenous health care provider (EPS, for its acronym in Spanish) and 99.4% belongs to the subsidized regime.

Objective. To describe the sociodemographic and clinical characteristics, exposure factors and healthcare regime in the Necoclí indigenous community from Antioquia, Colombia. (Figure 1)

Materials and methods. It was conducted an observational descriptive cross-sectional study, in which a validated survey was applied to collect sociodemographic and clinical data, exposure factors, and healthcare regime. The participants signed the informed consent and we proceeded to carry out the physical examination in which we measured anthropometric data, blood pressure, glucometry, hematuria and proteinuria with reactive strips.

Results. 70 individuals belonging to the Necoclí indigenous community from Antioquia participated in the study,

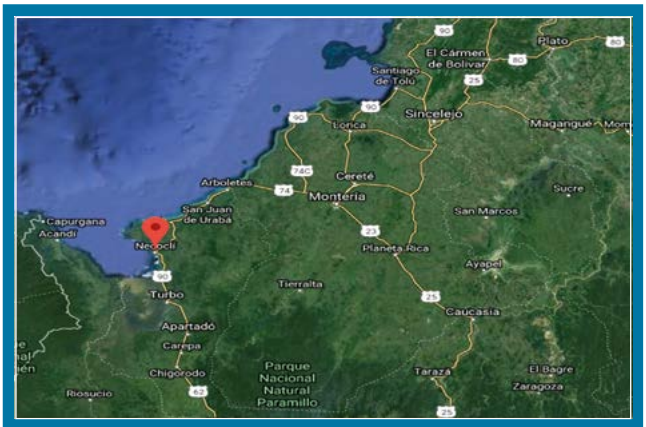

Figure 1. Georeferencing of the Necoclí community from Antioquia, Colombia.
Source: Google Earth.

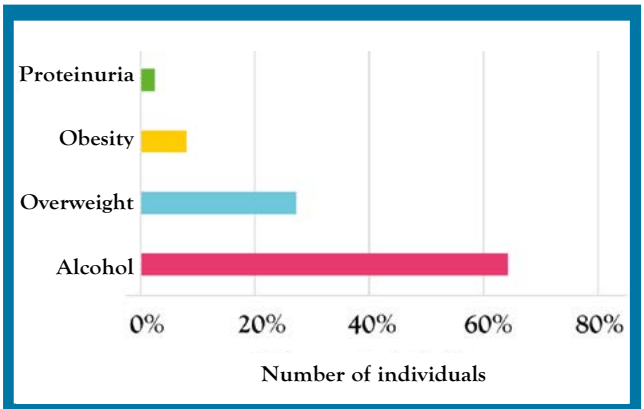

Figure 2. Clinical characterization and lifestyles.
Source: Own elaboration

of them, 10% had a presumptive diagnosis of prediabetes and 4.3% of diabetes mellitus. 7% of the women had a presumptive diagnosis of arterial hypertension (AHT) and 14.3% were in a risk situation due to altered systolic blood pressure (SBP) or diastolic blood pressure (DBP). Meanwhile, 4.7% of the men were at risk due to altered SBP or DBP. 7% of the individuals recognized that they had AHT.

Table 1 shows the sociodemographic characteristics of the population and Figure 2 shows their clinical characterization and lifestyles.

Conclusions. The application of a survey to characterize the situation of risk of kidney disease in indigenous communities allowed to generate an early opportunity for the diagnosis of comorbidities associated with kidney damage. However, it is necessary to implement longitudinal studies in order to study the behavior of kidney diseases and implement interventions in these populations.

Table 1. Sociodemographic characterization of the Necoclí community from Antioquia, Colombia.

Characteristics		Female	Male	Total
Age range	Youth (18-26 years)	5 (17.86%)	9 (21.43%)	14 (20.00%)
	Adulthood (27-59 years)	16 (57.14%)	25 (59.52%)	41 (58.57%)
	Older adult (60-75 years)	4 (14.29%)	8 (19.05%)	12 (17.14%)
	Elderly (76 years or Elderly (76 years or more)	0 (0.00%)	0 (0.00%)	0 (0.00%)
	Not reported	3 (10.71%)	0 (0.00%)	3 (4.29%)
	Total	28 (100.00%)	42 (100.00%)	70 (100.00%)
Activity/Occupation	Household chores	22 (78.57%)	0 (0.00%)	22 (31.43%)
	Agriculture	2 (7.14%)	39 (92.86%)	41 (58.57%)
	Commerce	1 (3.57%)	0 (0.00%)	1 (1.43%)
	Unemployed	0 (0.00%)	0 (0.00%)	0 (0.00%)
	Student	2 (7.14%)	2 (4.76%)	4 (5.71%)
	Construction	0 (0.00%)	0 (0.00%)	0 (0.00%)
	Other	1 (3.57%)	1 (2.38%)	2 (2.86%)
	Total	28 (100.00%)	42 (100.00%)	70 (100.00%)
General system of Social Security	Subsidized	28 (100.00%)	42 (100.00%)	70 (100.00%)
	Contributory	0 (0.00%)	0 (0.00%)	0 (0.00%)
	Special	0 (0.00%)	0 (0.00%)	0 (0.00%)
	Not reported	0 (0.00%)	0 (0.00%)	0 (0.00%)
	Total	28 (100.00%)	42 (100.00%)	70 (100.00%)
	Total	87 (100.00%)	43 (100.00%)	130 (100.00%)

Source: Own elaboration

INDICATIONS FOR THE AUTHORS

Editorial policy and scope

The Colombian Journal of Nephrology (Revista Colombiana de Nefrología) is the official organ of the Colombian Association of Nephrology and Hypertension. It was created in 2007. Its main mission is to disseminate scientific information derived from research in the different areas of Nephrology. It publishes original articles on applied research, review articles, reflection articles, case reports and letters to the director.

It is aimed at nephrology specialists, residents and professionals and institutions working in health sciences. It circulates every four months (January and December).

The papers sent to the Colombian Journal of Nephrology should adhere to the standards that appear in the Indications to authors. The papers that meet the requirements will be subject to arbitration by academic peers.

Publishing rules

Manifestation of originality: when sending the manuscript, the author must accept by signed written notice that the document is an original paper and it has not been published by any means, and that is not being evaluated by any other printed or electronic publication.

Informed consent: the authors must mention in the methods section that the procedures used in patients and controls had been carried out after obtaining informed consent. If patients data or photographs are reproduced, the authors are responsible for obtaining written consent, authorizing their publication, reproduction and diffusion in paper form or online.

Conflict of interests and funding: the authors must include preceding the references of the manuscript a paragraph where they express whether or not there are conflicts of interest. In addition, it should be submitted another paragraph that includes the source of funding of the research conducted.

Ethical Responsibilities: the papers that are sent to the Colombian Journal of Nephrology for evaluation must have been prepared respecting the international recommendations on clinical research (Declaration of Helsinki of the World Medical Association and recently reviewed [www.wma.net/e/policy]). When animal research is performed, it will be specified if the rules of the European Community on animal research were followed.

Sending of the manuscript

This journal provides immediate open access to its content under the principie of making research freely available to the public, which fosters a greater global exchange of knowledge.

Manuscripts should be sent to the OJS page of the Colombian Journal of Nephrology: www.revista nefrologia.org

The editor will review and verify that the manuscript meets the standards demanded in the Indications to authors and will send to the main authors an acknowledgement of receipt, stating if the manuscript was accepted for arbitration or if it requires any previous modification.

Manuscript submission

Papers must conform to the uniform requirements for manuscripts submitted to biomedical journals, established by the International Committee of Medical Joumal Editors www.icmje.org. Spanish versionwww. wane.org.

They are also available in the Panamerican Journal of Public Health (Rev Panam Salud Pública 2004;15:41-57) in http://joumal.paho.org/index.php?a_ID=531.

The Colombian Journal of Nephrology fulfills the criteria of the International System of Units for the use of signs and units of measurement. They can be consulted at: https://www.nist.gov/pml/specialpublication-330 (Spanish version: http://www2.cem.es/sites/default/files/siu8edes.pdf).

For the use of abbreviations, the Journal adopts the conventions ofthe RAE (Royal Spanish Academy), available in: http://www.rae.es/diccionario-panhispanico-dedudas/apendices/abreviaturas

Other alphabetizable symbols, (such as coins and cardinal points) can be consulted at: http://www.rae.es/diccionario-panhispanico-de-dudas/apendices/simbolos-alfabetizables

Non-alphabetizable symbols (such as equal, greater than and less than, percentage) must be adhered to: http://www.rae.es/diccionario-panhispanico-de-dudas/apendices/simbolos-o-signos-no-alfabetizables"

The whole manuscript, including the title page, the summaries, the references, the charts and the legends of the figures and charts, should be written double spaced, on one side of the sheet, without leaving extra spaces between paragraphs; leave a single space after the period. Use Arial Font size 12 and do not justify the text. Use italics or cursive script for the scientific terms, please, do not underscore them.

Cover sheet: short title for the headers of the pages, title in English, full names and last names of the authors, institutional affiliation (unit, department) and the name of the institution where the study was carried out. In addition, it should be noted the name of the author responsible for correspondence with his/her full address, phone and fax numbers and e-mail address.

Abstracts: the paper must include a structured abstract (introduction, objectives, materials and methods, results and conclusion) in Spanish and another one in English, each one should not have more than 250 words. The use of references is not allowed and the inclusion of abbreviations or acronyms is not recommended.

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7. Galache Osuna JG, Moreno Ambroj C, Sánchez-Rubio Lezcano J, Calvo Cebollero I, Portolés Ocampo A, Aured Guayar C, et al. Evolución a corto y medio plazo del infarto agudo de miocardio transmural en mujeres ancianas. ¿Son tratadas correctamente? Rev Esp Geriatr Gerontol. 2007;42:142-8.

Chapter in book

Authors, chapter title, editors, book title, city, publisher, year and pages. Por example:

32. Martínez-Murillo R, Rodrigo J. The localization of cholinergenic neurons and markers in the CNS. In: Stone TW, editor. CNS neurotransmitters and neuromodulators: Acetylcholine. London: CRC Press; 1995. p. 1-37.

Book

Authors, book title, city, publisher and year. Por example:

5. Gálvez Vargas R, Delgado Rodríguez M, Guillén Solvas JF. Concepto, importancia y futuro de la infección hospitalaria. Granada: Universidad de Granada; 1993.

Electronic material

Journal article in electronic format. Por example:

3. Morse SS. Pactors in the emergence of infectious diseases. Emerg Infect Dis. [electronic journal] 1995 Jan• Mar [accessed 05 Jun 1996]. Availableat: www.cdc.gov/nci-dod/EID/eid.htm

Journal articles with more than 6 authors (if there are up to 6 authors, all are cited): Parkin DM, Clayton D, Black RJ, Masuyer E, Priedl HP, Ivanov E, et al. Childhood leukemia in Europe after Chernobyl: 5 year follow-up. Br J Cancer 1996; 73: 1006-1012.

Books: Personal author or authors:Ringsven l\1K, Bond D. Gerontology and leadership skills for nurses. 2a ed. Albany (NY): Delmar Publishers; 1996. Editor or editors, or compiler or compilers, as author or authors: Norman IJ, Redfern SJ, editors. Mental health care for elderly people. New York: Churchill Livingstone; 1996. Organization as author and editor: Institute ofMedicine (US). Looking at the future of the Medicaid program. Washington: The Institute; 1992.

Chapters in books: Phillips SJ, Whisnant JP. Hypertension and stroke. In: Laragh JH, Brenner BM, editors. Hypertension: Pathophysiology, diagnosis, and management, 2nd ed. New York: Raven Press; 1995. p. 465-78.

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