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FREQUENCY OF CHRONIC KIDNEY DISEASE IN AN AREA OF HIGH INCIDENCE OF TERMINAL CHRONIC KIDNEY DISEASE AND ITS ASSOCIATED RISK FACTORS

Hugo E. Chávez¹, Darío Oseguera Herrera³, Valeria Contreras Oceguera³, Ma de Lourdes Ochoa Campollo³, Lucio O. Sánchez Macias⁴, Alfonso M. Cueto-Manzano², Fabiola Martíndel-Campo² IDivisión de Medicina Interna, HGR 180, IMSS, Guadalajara, Jalisco, México; 2Unidad de Investigación Médica en Enfermedades Renales, Hospital de Especialidades, CMNO, IMSS; 3Universidad Autónoma de Guadalajara; 4Hospital San Javier Guadalajara.

INTRODUCTION

Chronic kidney disease (CKD) is a worldwide problem that implies high disability, morbidity and mortality, in addition to a high cost for the health system. Jalisco occupies first place in the incidence of advanced CKD (ERCD). In Jalisco, some areas with a high frequency of CKD of undetermined etiology have been identified, such as the shores of Lake Chapala; however, the association of CKD with risk factors, housing characteristics and food security has not been studied.

OBJECTIVE

To determine the frequency of CKD in all stages, as well as its associated risk factors, in a region with a high prevalence of end stage CKD in Jalisco.

METHODS

Analytical cross-sectional study. Clinical history was made with questionnaires searching for exposure to environmental and nutritional factors, as well as family history and anthropometry to members of families from the Chapala riverside, who attended a community help center supported by the Government of State. Serum creatinine was measured to estimate the glomerular filtration rate (GFR) by CKD-EPI and the albuminuria/creatininuria ratio (ACR) in a urine sample after ruling out transient causes of albuminuria.

RESULTS

General data: 887 people were evaluated, belonging to 305 different families, and 450 adults. 295 were able to have blood and urine test.

	CKD clasification acording to GFR		AC 23%				
			A1	A2	A3		
	GFR (ml/min/1.7 3m2)	G1	188 (65%)	27 (9.4%)	7 (2.4%)		
		G2	35 (12.2%)	9 (3.1%)	3 (1.0%)		
		G3a	4 (1.4%)	1 (0.3%)	2 (0.7%)		
		G3b	1 (0.3%)	1 (0.3%)	4 (1.4%)		
		G4	0	1 (0.3%)	0		
		G5	1 (0.3%)	0	4 (1.4%)		

FINDINGS ACORDING TO K-DIGO

COMPARISON OF HOUSING CHARACTERISTICS AND FOOD SECURITY IN FAMILIES MEMBERS WITH AND WITHOUT CKD

Variables	Families without CKD	Families with CKD	р
People in the same house (n)	6 (5-7)	6 (4-9)	0.64
Family Income(\$)	6000 (4000-9600)	6400 (4000- 8000)	0.97
Alimentary Security (points)	4 (1-7)	4 (1-6)	0.93
No floor in house, n (%)	17 (7)	9 (10)	0.56
Thatch/ cardboard/. Wood roof, n (%)	5 (2)	0	0.16
Adobe, cardboard, wood roof, n (%)	7 (3)	3 (3)	0.78
Water spply <1/sem, n (%)	3 (1)	5 (6)	0.02
Drinking water for cooking, n (%)	199 (82)	74 (86)	0.66
Safe drinkig wate, n (%)	238 (98)	83 (96)	0.65
Toilet, n (%)	161 (66)	61 (71)	0.62
Drrainage, n (%) Don't Have Public network Septic Tak Pipe to ravie Pipe to the rriver or lake	5 (2) 148 (61) 74 (30) 0 16 (7)	1 (1) 47 (55) 32 (37) 1 (1) 5 (6)	0.34
Public electricity service, n (%)	220 (90)	79 (92)	0.36
Cook wood, charcoal (%)	159 (65)	51 (60)	0.57
They burn, throw away or bury garbage n (%)	42 (18)	16 (19)	0.71
Federal support, n (%)	81 (35)	54 (35)	0.94
Pesticide use, n (%)	151 (63)	52 (61)	0.80
They live around the lake, n (%)	159 (66)	66 (77)	0.06
They live aroud crops, n (%)	13 (5)	15 (17)	0.001

RISK FACTORS WITH OR WITHOUT CKD

Variables	Normal N = 227	CKD N = 68	р
Edad (años)	40 ± 14	49 ± 17	<0.0001
Male sex, n (%)	24 (11)	18 (26)	0.001
Marital Status, n (%) Single Married Widowed/divorced	43 (19) 161 (72) 19 (9)	7 (11) 72 (80) 6 (9)	0.06
Scholarship, n (%) Illiterat junior high school High school/ University	20 (9) 175 (79) 27 (12)	11 (16) 47 (70) 9 (14)	0.12
Smoker, n (%)	6 (3)	2 (3)	0.21
Alcoholism, n (%)	13 (6)	3 (4)	0.87
Talavera/clay work, n (%)	6 (3)	1 (1)	0.56
Pesticid exposure (%)	48 (21)	21 (31)	0.11
Diabetes, n (%)	23 (10)	20 (29)	<0.0001
Hypertension, n (%)	14 (6)	18 (26)	<0.0001
Dyslipidemia, n (%)	8 (4)	7 (10)	0.03
Hyperuricemia, n (%)	0	3 (4)	0.002
Repeat, UTI n (%)	2 (1)	1 (1)	0.69
CKD relatives, n (%)	75 (34)	23 (34)	0.69
Bodie Mass index(kg/m ²)	26 ± 4	28 ± 5	0.03
Systolic blood pressure (mmHg)	117 ± 12	126 ± 18	<0.0001
Diastolic blood pressure (mmHg)	74 ± 9	78 ± 9	0.004

MULTIVARIATE ANALYSIS FOR ADULTS

Variable	В	IC (95%)	р
Age	1.03	1.01 a 1.04	<0.0001
Hypertension	2.97	1.26 a 7.02	0.01
Systolic blood presure	1.03	1.01 a 1.05	0.001

CONCLUSIONS

The frequency of CKD is high, the majority of patients in initial stages. In adults the main associated risk factors were age, hypertension and systolic blood pressure. In the comparison of housing and food security, families with members with CKD had a lower weekly water supply and greater proximity to farming areas.