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**A FLUCTUATING DERMATOGLYPHIC TRAIT ASYMMETRY AS A RISK MARKER
IN CHRONIC KIDNEY DISEASE PATIENTS OF CARIBBEAN REGION. A CASE-
CONTROL STUDY.**

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Objectives: The peculiar pattern of dermatoglyphics has a diagnostic significance in various clinical disorders that have a strong genetic background. Chronic kidney disease (CKD) and its associated high morbidity and mortality cause a significant financial burden and reduced quality of life in affected patients of Guyana and the Caribbean. The current study aims to compare and evaluate the fluctuating qualitative dermatoglyphic trait as a risk marker in CKD patients of Caribbean region. This research strive for development of new technique for the early prediction of diabetic kidney disease, and its management.

Methods: The fingerprints were obtained and analyzed for each type of pattern. Ethical clearance was obtained from the institutional review board. The case-control study was conducted with 100 CKD patients and 100 controls who were non-CKD patients admitted for various other reasons to the Internal Medicine Department, Georgetown Public Hospital Corporation, Guyana. Dermatoglyphics parameters such as Whorl, Arch, Loop, Double Loop whorl, etc. were studied.

Results: Whorls and Ulnar loops were the predominant digital pattern noted in both hands of male as well as female patients of Chronic Kidney Diseases. The results are depicted in the table.

Conclusions: This study supports that fingerprint patterns may be altered in several clinical disorders and similar changes are observed in various qualitative parameters of dermatoglyphic patterns in the digits of the hand of Chronic Kidney Patients of Guyana. These connections can be a highly significant tool or of diagnostic aid from a clinical point of view if they could be rationalized or substantiated in determining the diseases which have a strong hereditary basis and can be employed as a method of screening for CKD of the high-risk population on early detection. Future studies with proper protocol, adequate cases, and control groups may provide stronger evidence to resolve uncertainty related to the etiology of kidney diseases.

Table 1: Incidence of digital pattern in CKD and non-CKD group with equal gender distribution (n=1000 digits in each group)

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Groups (CKD)	Gender	Nos. (digits) 100(1000)	Whorl	Accidental Whorl	Double Loop Whorl	Ulnar loop	Radial Loop	Arch
Diabetics with Nephropathy(DN)	Male	14(140)	69(6.9%)	4(0.4%)	10(1%)	45(4.5%)	7(0.7%)	5(0.5%)
	Female	10(100)	42(4.2%)	5(0.5%)	7(0.7%)	30(3%)	10(1%)	6(0.6%)
DN & Obesity	Male	5(50)	21(2.1%)	2(0.2%)	3(0.3%)	19(1.9%)	1(0.1%)	4(0.4%)
	Female	11(110)	47(4.7%)	9(0.9%)	11(1.1%)	31(3.1%)	4(0.4%)	8(0.8%)
DN & Hypertension	Male	30(300)	131(13.1%)	12(1.2%)	29(2.9%)	100(10.0%)	14(1.4%)	14(1.4%)
	Female	19(190)	89(8.9%)	9(0.9%)	15(1.5%)	62(6.2%)	6(0.6%)	9(0.9%)
DN, Hypertension & Obesity	Male	3(30)	15(1.5%)	1(0.1%)	2(0.2%)	9(0.9%)	1(0.1%)	2(0.2%)
	Female	8(80)	35(3.5%)	3(0.3%)	7(0.7%)	27(2.7%)	3(0.3%)	5(0.5%)
Total (CKD Case)	Male	52(520)	236(23.6%)	19(1.9%)	44(4.4%)	173(17.3%)	23(2.3%)	25(2.5%)
	Female	48(480)	213(21.3%)	26(2.6%)	40(4.0%)	150(15.0%)	23(2.3%)	28(2.8%)
Control	Male	52(520)	204(20.4%)	15(1.5%)	35(3.5%)	155(15.5%)	51(5.1%)	60(6.0%)
	Female	48(480)	192(19.2%)	21(2.1%)	33(3.3%)	134(13.4%)	49(4.9%)	51(5.1%)