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Research Article

A CROSSWISE EXPLORATION TO ASSESS ENDOCRINE CONFRONTATION BETWEEN THE VICTIMS OF CHRONIC RENAL FAILURE (CRF)

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Abstract:

Objective: To assess endocrine confrontation between CRF victims was the objective of this exploration research.

Victims and Methods: All the recruited victims did not show any dialysis or diabetes history. This crosswise exploration was carried out on a total of 50 victims being treated for structural renal abnormalities or deranged renal functions at Sir Ganga Ram Hospital, Lahore (December 2018 to November 2019). All the victims were screened for lipid profile, renal function tests, complete blood count (CPC), antiserum endocrine stages and fasting plasma glucose. Another fifty healthy controls were also included in the exploration of the same age Set. We made a statistical examination of exploration outcomes on SPSS software. HOMA-IR method was used for the calculation of endocrine confrontation.

Results: Men dominated ladies in number in cases. We enrolled controls and cases having fifty in each Set. On the other hand, in controls 26% were ladies and 74% were men. Total of 34% of the cases were ladies; whereas, 66% were men. CRF victims showed higher stages of fasting endocrine and importantly higher HOMA-IR in comparison to controls (P-Value 0.001). The lipid profile showed an important difference in the stages of triglycerides in statistical examination. The Average age of controls and cases was respectively (49 ± 9) years and (50 ± 10) years.

Conclusion: HOMA-IR was importantly higher between CRF victims which clearly shows an association between endocrine confrontation and CRF.

Keywords: CRF, HOMA-IR, Endocrine Confrontation, and Hypertriglyceridemia.

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INTRODUCTION:

In Pakistan, the economy is seriously suffering from the ever-increasing burden of CRF. Advanced treatment centres and scarcity of screening facilities are adding more to the syndrome burden and helplessness of the healthcare department. Estimates indicate that 100 in every million have already reached end-stage renal syndrome [1]. National Kidney Foundation estimates a 10% onset of CRF in the total populace causing morbidity and mortality as a global syndrome burden. The number of deaths is always on an increase from 2010 onwards due to CRF. The position of this syndrome drastically rose from 27th position to 18th position in the global estimates from 1990 to 2010. Its magnitude is just higher next to the occurrence of AIDS and HIV between the world populace [2].

CRF is more likely to develop between the victims already suffering from uncontrolled diabetes mellitus. The more the onset of uncontrolled diabetes the more risk of CRF development. Higher endocrine confrontation also develops between CRF victims. Vitamin 'D' deficiency, systematic inflammation, depressed antiserum erythropoietin, elevated antiserum adipokines, oxidative stress, fetuin-A, endoplasmic reticulum stress, metabolic acidosis, etc. cause the onset of CRF [3]. National Kidney Foundation criteria enumerate three months of more than three months of syndrome period as CRF whether the damage is functional impairment or structural impairment of kidney with or without glomerular filtration rate reduction. Such pathological derangements manifest the increase in the biochemical markers resulting in kidney syndrome [4]. Endocrine confrontation is also a contributory factor in the metabolic syndrome associated with biochemical abnormalities [5]. Endocrine confrontation also predicts energy malnutrition and coronary artery syndrome. Moreover, endocrine confrontation is also caused by skeletal muscles' post-receptor alterations.

CRF victims also show lipid profile derangement as another vital abnormality. The triglycerides clearance impairs because of lipoprotein lipase activity reduction and hepatic triglyceride lipase. This clearance defect increased triglycerides stages [6]. The role of the kidney is important in endocrine degradation and metabolism. Endocrine renal clearance routes include pre-tubular capillaries diffusion and binding of peritubular cells with contra luminal membrane; whereas, the second route passes through luminal endocrine re-absorption by proximal tubular cells. After being diffused the endocrine degrades into amino acids and oligopeptides by

endocrine protease process. Mechanism clearance breach prolongs endocrine metabolism and its half-life [7, 8]. The existing renal condition also aggravates endocrine confrontation development and attributes to CVD risk. Timely endocrine confrontation diagnosis is helpful to limit the chances of a disability and increase health outcomes. Therefore, the objective of our exploration was to assess endocrine confrontation between CRF victims. Lipid abnormalities manifestation is normal as metabolic syndrome between CRF victims which leads to endocrine confrontation. This ultimate increase in endocrine confrontation also increases atherogenic dyslipidemias [9, 10].

VICTIMS AND METHODS:

All the recruited victims did not show any dialysis or diabetes history. This crosswise exploration was carried out on a total of 50 victims being treated for structural renal abnormalities or deranged renal functions at Sir Ganga Ram Hospital, Lahore (December 2018 to November 2019). The research populace was enrolled through convenient sampling. Another fifty healthy controls were also included in the exploration of the same age Set. We did not include all those victims on dialysis and who were already diagnosed with diabetes mellitus. The total populace was subdivided into Set A & B comprising of deranged renal functions and structural renal abnormality victims respectively. Every patient was told about the purpose and process of this exploration and they also gave their informed consent before the commencement of this exploration. Age-matched healthy individuals were placed in Set B. All the victims were screened for lipid profile, renal function tests, complete blood count (CPC), antiserum endocrine stages and fasting plasma glucose. We observed strict septic conditions for sample collection. We made a statistical examination of exploration outcomes on SPSS software. HOMA-IR method was used for the calculation of endocrine confrontation.

RESULTS:

On the other hand, in controls 26% were ladies and 74% were men. We enrolled controls and cases having fifty in each Set. Men dominated ladies in number in cases. Total of 34% of the cases were ladies; whereas, 66% were men. The Average age of controls and cases was respectively (49 ± 9) years and (50 ± 10) years. The anthropometric data shows The antiserum creatinine value for cases was (345 ± 255) umol/L and (71 ± 9) umol/L for controls. Average BMI value (23 ± 2) kg/m² for Set 'A' cases and (24 ± 3) kg/m² for Set 'B' controls. Average antiserum urea value for cases was (17.84 ± 11) mmol/L and (3.7 ± 0.7) mmol/L for

controls. CRF victims showed higher stages of fasting endocrine and importantly higher HOMA-IR in comparison to controls (P-Value 0.001). Average fasting endocrine level for cases was calculated (19.4 ± 9.1) uU/ml and (9.3 ± 6.6) uU/ml for controls. Endocrine stages and fasting glucose were calculated through the HOMA-IR method. Detailed comparison

of exploration outcomes for both cases and controls is given in Average and SD values in the tabular form for anthropometric data, glycemic parameter and lipid profile along with P-Values and HOMA-IR correlation. The lipid profile showed an important difference in the stages of triglycerides in statistical examination.

Table: Lipid Profile, Anthropometric Data, and Glycemic Parameters

(Average \pm SD)		Case	Control	P-Value	Correlation with HOMA-IR
Anthropometric data	Height	164.464 \pm 8.635	164.765 \pm 10.574	Not applicable	
	Age	50.782 \pm 14.815	49.705 \pm 9.834		
	Weight	63.704 \pm 10.805	65.204 \pm 9.855		
	Hb Level	10.014 \pm 1.942	13.625 \pm 1.345	0.124	0.554
	Fasting Glucose	5.594 \pm 0.935	5.524 \pm 0.745	0.074	0.018
Glycemic Parameters	Fasting Endocrine	19.465 \pm 9.135	8.530 \pm 3.064	<0.002	0.954
	HbA1C	5.855 \pm 0.507	5.295 \pm 0.563	0.262	0.393
	BMI	23.385 \pm 2.287	24.226 \pm 3.404	0.002	0.113
	HOMA-IR	2.644 \pm 1.307	1.155 \pm 0.393	<0.002	
Lipid Profile	LDL-C	2.584 \pm 0.598	2.208 \pm 0.503	0.053	0.147
	HDL-C	1.015 \pm 0.167	1.005 \pm 0.201	0.323	-0.037
	Cholesterol	4.624 \pm 1.008	4.018 \pm 0.808	0.063	0.062
	Triglycerides	1.985 \pm 0.657	1.298 \pm 0.455	0.002	0.26

DISCUSSION:

We assessed endocrine confrontation between the victims of CRF. HOMA-IR and renal functions showed positive correlations for both antiserum creatinine and urea (P-Value < 0.06). CRF victims' biochemical profile shows endocrine confrontation as an early marker. CRF victims develop endocrine confrontation from a very early stage but every patient is developing endocrine confrontation towards the end-stage failure of the kidney. Another author also finds similar outcomes for the HOMA-IR score with a Average value of (2.25 ± 1.07) Both Sets showed a difference in the Average stages of fasting endocrine especially cases with a higher Average HOMA-IR score. [11]. The outcomes of this exploration indicate a positive correlation between body mass index and HOMA-IR score. Similar exploration also found a correlation between BMI and HOMA-IR (28 versus 3.05) Deranged lipid profile and BMI also attribute in endocrine confrontation development which is why we also included both factors in our exploration. [12]. There was a positive correlation between HOMA-IR

and antiserum triglycerides stages (P-Value 0.004). Lipid profile variables indicated Average value differences in both cases and controls along with positive HOMA-IR correlation except an inverse association between endocrine confrontation and HDL-C. Average value differences and inimportant P-values of HDL-C, LDL-c, and total cholesterol are because of the small sample populace selected for this particular exploration. Studies have also shown a positive correlation between HOMA-IR, plasma creatinine stages, triglyceride and cholesterol [12, 13]. In those cases where diabetes was absent, hypertension played its part in CRF development. Two studies showed 74% and 80% prevalence of hypertension between the victims of CRF while our outcomes report 74% hypertension score between CRF victims [14]. Our reported reduced haemoglobin stages refer to the small populace numbers. Different Sets studied by various authors also report a decrease in the stages of haemoglobin [15]. Another research has reported a Average triglyceride value of (1.676 ± 1.05) [16]. Numerous other factors are also

contributing to the development of anaemia between CRF victims with attribution of hepcidin, tumour necrosis factor (TNF-alpha) and interleukins (IL1-6) [17]. Residual renal cell functioning directly attributes in the development of anaemia [18].

CONCLUSION:

HOMA-IR was importantly higher between CRF victims which clearly shows an association between endocrine confrontation and CRF. Management strategies need serious modulation of therapeutic interventions for an increased presence of endocrine confrontation between CRF victims.

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