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Research Article

### CONNOTATION AMONG STAGES OF OPSONIN URIC ACID AND HARSHNESS OF CONGESTIVE CARDIAC FAILURE

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**Abstract:**

**Objective:** There is a growth in the stages of opsonin uric acid in scientific situation of hypoxia. The foundation of this investigation work was to conclude the connotation among harshness of congestive cardiac failure (CCF) and stages of opsonin uric acid.

**Methodology:** In this investigation, we examined total two hundred and eighty five victims with analysis of CCF who got admittance in Sir Ganga Ram Hospital, Lahore from December 2018 to May 2019. The variety of the age of the victims was 17 to 67 years. We used the NYHA (New York Health Association) recording to admittance the CFH harshness. We careful the stage of opsonin uric acid of superior than 7 mg/dl as great.

**Results:** We examined total 285 victims anguish from congestive cardiac failure. The normal age of the victims of this investigation work was  $54 \pm 2.8$  years. There were 65.96% masculine and 34.03% feminine victims in this investigation work. Forty out of a hundred victims were present in Class-2 of NYHA, 32.63% victims were in Class-3 and 25.610% victims were in Class-4 and 1.75% victims were in Class-1. Total 59.29% victims satisfied the uricacidemia description. Between them 83.43% were masculine and 16.57% were feminine victims. Mainstream of the victims contemporary with Uricacidemia (62.13%) were present in the age group from 51 to 60 years, with a regular age of  $57.0 \pm 4.50$  years. We exposed an important connotation among the BNP and stage of opsonin uric acid ( $P < 0.0010$ ), and usage of diuretics ( $P < 0.0010$ ). Total 34.94 CCF victims present with uricacidemia were in NYHA Class-3 & NYHA Class-4 whose opsonin uric acid was additional than 8.0 mg/dl in contrast with the 31.59% CCF victims with uricacidemia whose opsonin uric acid was inferior than 8.0 mg/dl.

**Conclusion:** We detected the extraordinary level of opsonin uric acid in 59.29% victims undergoing from CCF. This conclusion presented that stage of opsonin uric acid can deliver predictive data in populaces. This indicator of opsonin uric acid can be dignified effortlessly with little expenditure to identify the victims with high danger of congestive cardiac failure.

**Keywords:** Uricacidemia, Congestive cardiac failure, comparison, average association, NYHA, uric acid, significant.

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**INTRODUCTION:**

Organ meats defecated the uric acid which is the final produce of failure of organ meats. To most significant impetus which are responsible for the failure of uric acid are XO (Xanthine Oxidase) and XDD (Xanthine Dehydrogenase). These impetus are also accountable for the group of fundamental free from oxygen which outcomes into oxidative pressure. Furthermore, oxidative pressure in mixture with discrepancy of nitric oxide could overstate the provocative paths producing additional increase in the invention of the cytokine [1]. The variety of the standard level of opsonin uric acid is from 2.40 to 7.40 mg/dL in male while the variety is from 1.40 to 5.80 mg/dL in ladies [2]. CCF is the reason of high rate of illness as well as transience in complete world. This is also the reason of high prices of health upkeep services. Epidemiological study works have exposed a association among improved level of opsonin uric acid to an growth degree of vascular happening and degree of transience between victims existing with HTN (Hypertension), DM (Diabetes Mellitus) and preceding cardiovascular difficulties [3, 4].

There is analysis of upper than 550000 new victims of failure of cardiac every 12 months in only USA [5]. The failure of cardiac which is very communal matter in standard public with rise costs in health upkeep grounds and high rate of transience, inspirations about two percent young populace of the advanced countries [6]. Improved stages of opsonin uric acid are also very communal in CCF. There is lot of consideration to connotation among cardiovascular sicknesses and the stages of opsonin uric acid in present years [7]. The stage of opsonin uric acid can be a vigorous indicator for the analysis of the victims present with previously prevailing cardiac problems [8]. There are insufficient investigation studies to assess the improved stages of opsonin uric acid as sovereign danger issue for failure of cardiac in community. This very exploration work approved to regulate the connotation among cruelties of failure of cardiac with the stages of opsonin uric acid.

**METHODOLOGY:**

The range of the age of the victims was seventeen to sixty seven years. This research work included total two hundred and eighty five victims who got admission in Department of Cardiology of Sir Ganga Ram Hospital, Lahore from December 2018 to May 2019. The victims suffering from other serious diseases were not the part of this research work. Trained cardiologists diagnosed the failure of cardiac in accordance with the current guidelines. We collected the data about the disease history as well as all the victims underwent complete examination. We assessed the severity of the CCF with the utilization of the NYHA classification. We explained the advantages and objective of this research work to all the victims of this research work and we took written consent from all the participants of this research work.

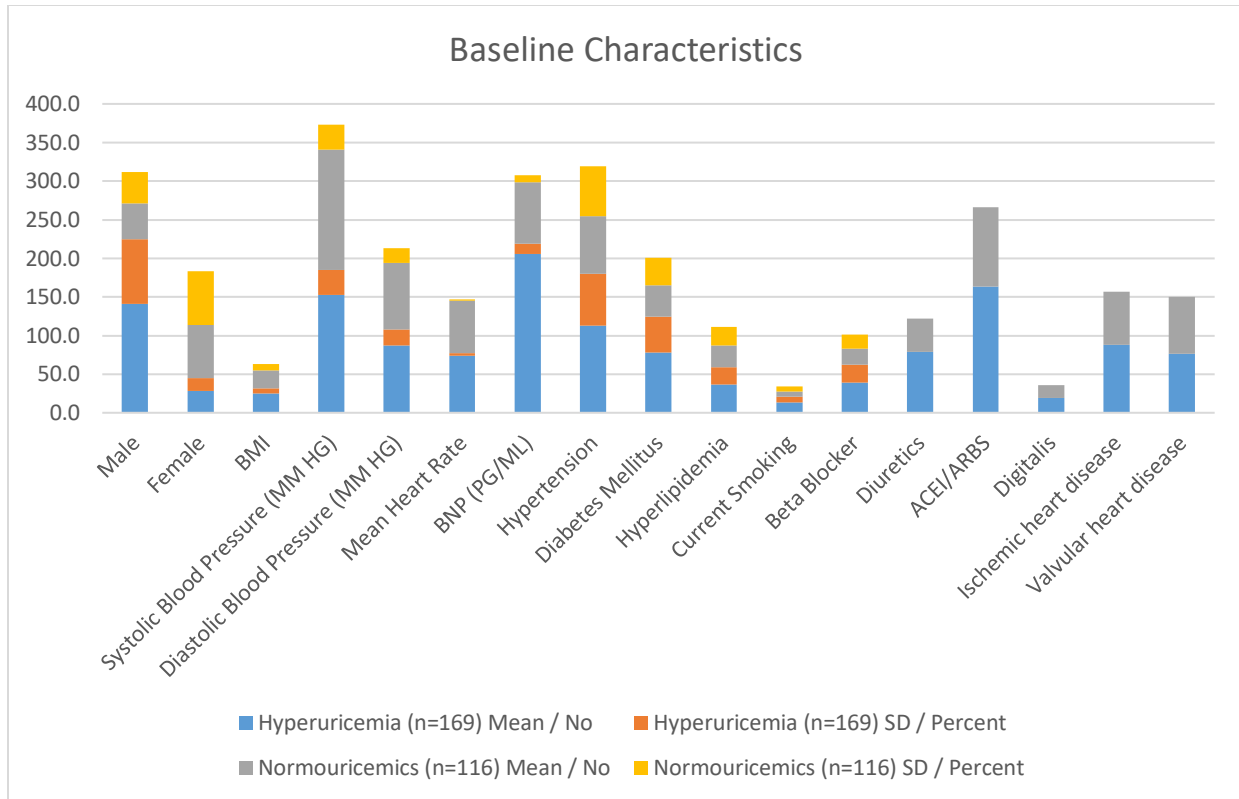
We defined the uricacidemia as a level of opsonin uric acid  $> 7$  mg/dl. The measurement of the level of opsonin uric acid carried out after half day fasting with the use of enzymatic procedures with the help of chemical analyzer. We took the 5 cc blood from every patient and sent those sample to the laboratory of the hospital on that very day. SPSS V. 23 was in use for the statistical analysis of the collected information. We measured the level of opsonin uric acid under complete supervision of skilled pathologist. We gathered all the information on separate well organized Performa for each patient. P value of less than 0.050 considered as significant. We calculated the averages and standard deviations for various continuous variables like age of the victims and levels of opsonin uric acid we expressed the categorical variables in percentages.

**RESULTS:**

There were total 65.96% (n: 188) male and 34.030% (n: 97) female victims. Total 59.290% (n: 169) met complete uricacidemia definition. In this research work, we evaluated total two hundred and eighty five victims suffering from CFH with a range of age from 17 to 67 years with an average age of  $54.0 \pm 2.80$  years. Table-1 displays the baseline traits of the victims suffering from congestive cardiac failure.

**Table-I: Showing baseline characteristics n=285.**

Variables		Uricacidemia (n=169)		Normouricemics (n=116)		P- value
		Mean / No	SD / Percent	Mean / No	SD / Percent	
Clinical & baseline characteristics	Female	28.0	16.56	69.0	69.48	-
	Male	141.0	83.43	47.0	40.51	-
	BMI	24.6	7.00	22.9	9.00	0.1680
	Diastolic Blood Pressure (MM HG)	87.0	21.00	86.0	19.00	-
	Mean Cardiac Rate	73.9	3.60	67.5	2.00	0.2390
	BNP (PG/ML)	206.0	13.00	79.8	9.00	<0.001
	Systolic Blood Pressure (MM HG)	153.0	32.00	156.0	32.00	-
Risk factors	Hyperlipidemia	37.0	21.89	28.0	24.13	0.0860
	Current Smoking	13.0	7.69	7.0	6.03	0.9320
	Hypertension	113.0	66.86	75.0	64.65	-
	Diabetes Mellitus	78.0	46.15	41.0	35.34	0.0640
Drugs	ACEI/ARBS	163.0	-	103.0	-	0.6430
	Digitalis	19.0	-	17.0	-	0.0510
Etiology	Valvar cardiac disease	76.0	-	74.0	-	0.9760
	Ischemic cardiac disease	88.0	-	69.0	-	-



Among total two hundred and eighty five victims suffering from CFH, seventeen victims were in the age group of less than eighteen year of age, 35 victims in the age group of 18 to 40 years, fifty eight victims in the age group of 41 to 50 years whereas one hundred and forty six victims were in the age group 51 to 60 years and twenty nine victims were present in the age group of greater than sixty years of age.

**Table-II: Oposonin uric acid levels and severity of congestive cardiac failure: n=285.**

SUA (MG/DL)	NYHAI	NYHAII	NYHAIII	NYHAIV	Total
n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
>12	0(0%)	1.0 (0.350%)	8.0 (2.800%)	14.0 (4.910%)	23.0 (8.070%)
8.1 - 12	1.0 (0.350%)	36.0 (12.630%)	30.0 (10.520%)	30.0 (10.520%)	97.0 (34.930%)
6 to 8	1.0 (0.350%)	37.0 (12.980%)	28.0 (9.820%)	24.0 (8.420%)	90.0 (31.570%)
<6	3.0 (1.050%)	40.0 (14.030%)	27.0 (9.470%)	5.0 (1.750%)	75.0 (26.310%)
Total	5.0 (1.750%)	114.0 (40.0%)	93.0 (32.630%)	73.0 (25.610%)	285.0 (100.0%)

### DISCUSSION:

Various research work have stated that uricacidemia shows a high risk of mortality in the victims present with cardiac failure. In one current research work, high level of uric acid increased the all causes mortality among victims suffering from chronic or acute cardiac failure [10]. We stated in this research work that 59.290% victims were present with high levels of oposonin uric acid. There are many reports about the high levels of oposonin uric acid in the victims of cardiac failure. This research work also reported the possibility of the levels of oposonin uric acid as maker

of cardiovascular complications [11]. Different research works have displayed an association between enhanced levels of oposonin uric acid in cardiac failure and high rate of morbidity as well as mortality [12]. The high levels of oposonin uric acid was present with association with long-term poor outcomes in such victims of cardiac failure [11, 13, 14]. The level of oposonin uric acid has displayed to have inverse relation with the magnitude of maximal intake of oxygen and functional capacity [15]. The increased levels of uric acid enhances the severity of the cardiac failure as prescribed in NYHA classification [16].

Asymptomatic uricacidemia is an inflammatory state having affiliation with the increased levels of inflammation of opsonin markers, count of neutrophil and CRP (C-reactive protein) [17]. In the victims present with cardiac failure, the concentration of opsonin uric acid have association with the high superoxide dismutase activity and vasodilatation of dependent on endothelium [18]. Some works debate that enhanced levels of opsonin uric acid occurring as an outcome of use of diuretic may play an advantageous role [19]. The data in the present field is not consistent whether a reduction in the level of opsonin uric acid will result in clinical advantage to those victims present with the confirmed cardiac failure [20].

### CONCLUSION:

The decreasing of the level of opsonin uric acid can be the modern approach to reduce the risk and treatment of cardiac failure. We found the high level of opsonin uric acid in 59.290% victims with congestive cardiac failure. The level of opsonin uric acid can distinguish the without any symptom of CCF.

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