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Research Article

**A COMPARATIVE STUDY OF CVD PATIENTS IN PATIENTS
ADMITTED IN A TERTIARY CARE HOSPITAL**¹Dr. Nadeem Malik, ²Dr. Hifza Rani, ³Dr. Unbreen Pervaiz¹SMO, Holy Family Hospital, Rwp²Independent Medical College Faisalabad³WMO THQ Kallar Syedan**Abstract:**

Objective: The objective of this research work was to compare the designs of disease in 2 information groups of patients, with a distance of five years, at NICVD (National Institute of Cardiovascular Diseases) a hospital of cardiology located in Karachi. The aim was to conclude the alterations in the CVD patients at a unit of acute cardiology in duration of complete five years.

Methodology: This is a traditional elaborated research work. This case study carried out on the patients admitted in NICVD located in Karachi. This research work covered the complete month of September, 2014 & complete month of September in the year of 2018. The files of the patient data rechecked and concerning information was documented on a special form designed for this subject matter.

Results: In the month of September of the year 2014, four hundred and fourteen patients got admission in the hospital. More than seventy-one percent were the male participants. Most of the patients were forty to fifty year of age or beyond. ACS (acute coronary syndrome) was the most frequent and available in about forty percent participants. More than twenty-seven percent patients had MI (myocardial infarction) while heart muscle diseases were available in more than ten percent patients. The total rate of mortality was about 3.4%. In the month of September of the year of 2018, four hundred and forty-six patients got admission in the hospital. Sixty-three percent were the male participants. More than seventy-one percent participants were more than forty year of age. ACS was available in 43.04% patients, MI was present in twenty-six percent patients and heart muscle diseases were present in more than thirteen percent patients. The total rate of mortality was about 1.34%.

Conclusion: The same outcomes of two information groups patients at a distance of five years proposes that the CVD burden & design has not altered considerably at this health centre. There is a high occurrence of CVD in males and age groups of high age. The major contributory factors were ACS & MI.

Key Words: Cardio Vascular Diseases, Hypertension, Urbanization, Cardiology.

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INTRODUCTION:

CVDs (cardiovascular diseases) are very vital problems of health in the whole world [1]. This is very big issue in the countries which are under development as Pakistan [2]. This increase in the occurrence of CVDs in the non developed countries linked with change in demography, urbanization, hypertension, high blood sugar, modification in the life styles and fatness [3]. The increase in the death rates in last thirty years because of IHD (ischemic heart disease) is very high in non developed countries as compared to the countries which are developed ones [4]. These results are based on only the dynamics of our populations and amount of the risk factors are not the part of increase potential of this disease [5, 6].

There is occurrence of one lack deaths per year as a result of these diseases according to survey carried out in [7]. This information of mortality does not provide the exact conditions of the problem due to many people are living with these disease causing disabilities [8]. Many countries have got rid from RHD (rheumatic heart disease) but this disease is still present in our country [9, 10]. The aim of this study was to conclude the burden of different CVDs at a cardiology centre located in Karachi and to assess the alterations in the designs of CVD over duration of last five years.

METHODOLOGY:

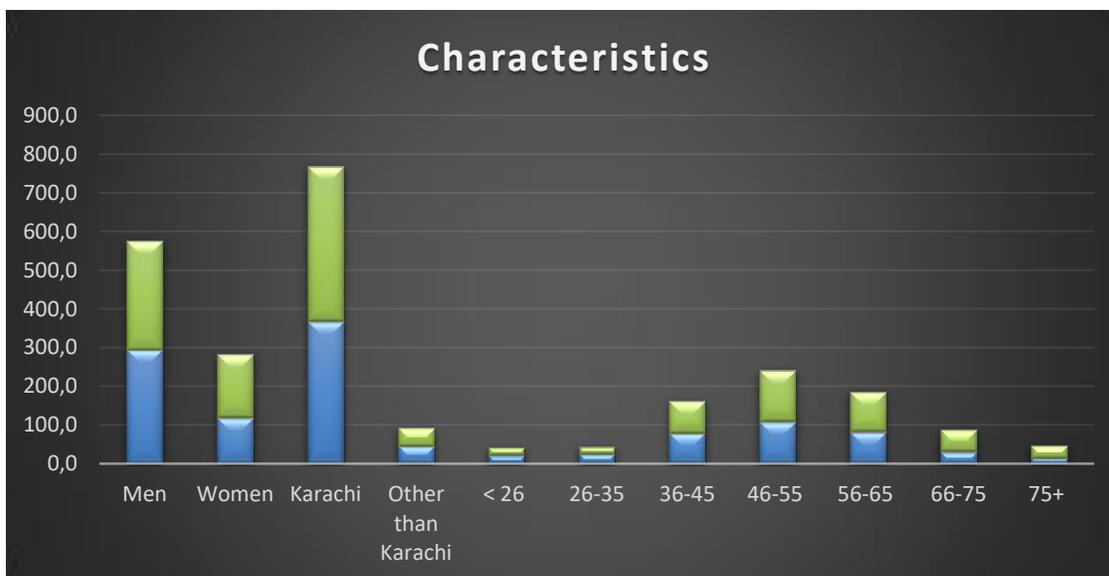
This research work was conducted on the patients in NICVD in the month of September of the year 2014

and in the month of September in the year of 2018. The files containing the patient's data were rechecked. The data of the patient age, gender, their postal address, date of discharge, stay in hospital and primary detection had maintained on a special form arrange for this subject. SPSS software version thirteen was in use for the statistical data entered on the form. The checking of all the information carried out with help of this software as well as another investigator. The conclusion of the frequencies and the evaluation of the P amount were the necessary elements for the analysis of data. Chi square method was in use for the assessment of those two elements.

RESULTS:

The traits of the study participants are provided in Table-1. Sub categories are available in Table-2 with each discovery. Table-3 provides the results of the participants in both data sets. Four hundred and fourteen patients got admission at NICVD in the month of September 2014. Males were greater than females. Most of the participants were living their 6th decade of lives. Most of the patients were from Karachi. MI was present in 103 patients. MI of front wall was available in 47.5% and MI of lower wall was available in 39% patients. One hundred and fifty patients were suffering of ACS. Heart muscle diseases were available in more than ten percent patients. There were many other CVDs with different percentages in the study populations. Fourteen patients died in the same month, 395 patients got discharge and three patients left the centre without getting medical advice.

Parameter		Sep, 2014 (414)		Sep, 2018 (446)	
		n	%	n	%
Gender	Men	295.0	71.30%	281.0	63%
	Women	119.0	28.70%	165.0	27%
Address	Karachi	368.0	88.80%	399.0	89.50%
	Other than Karachi	46.0	11.20%	47.0	10.50%
Age groups	< 26	21.0	5%	20.0	4.50%
	26-35	26.0	6.20%	18.0	4%
	36-45	79.0	19%	83.0	18.60%
	46-55	109.0	26.30%	132.0	29.60%
	56-65	82.0	19.80%	103.0	23.10%
	66-75	31.0	7.50%	57.0	12.80%
	75+	14.0	3.40%	33.0	7.40%

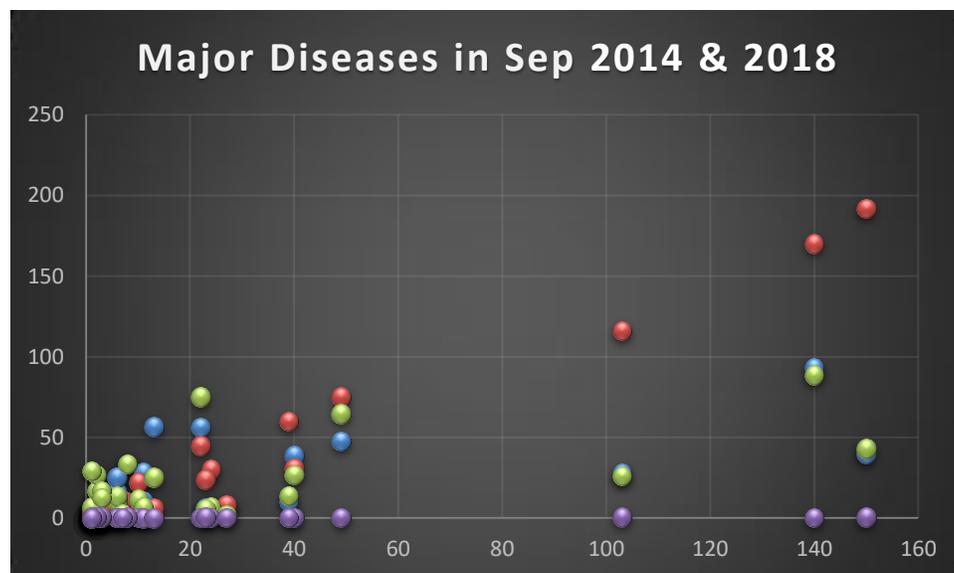


Four hundred and forty-six patients got admission in the month of September 2018. Males were larger in quantity than females. Most of the patients were living 6th decade of their lives. MI was available in one hundred and sixteen patients. Front wall MI was the most common MI. One hundred and ninety-two patients got admission with ACS. Sixty patients had the heart muscle diseases. There were also different percentages of patients suffering of various CVDs. Six patients died in the same month, four hundred and thirty-six got discharges from centre and four patients left the hospital without taking complete medical treatment.

Table-II: Major presentations in September 2014 and September 2018

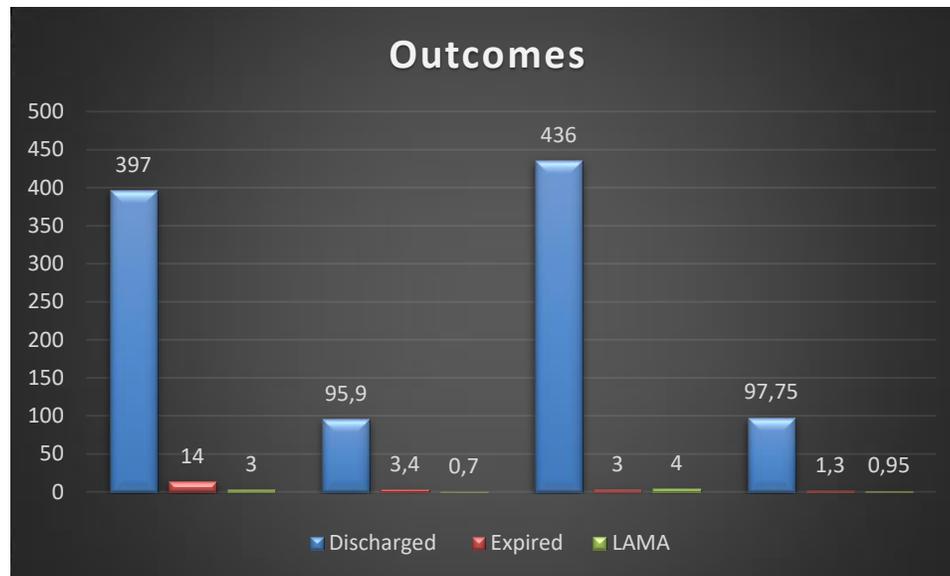
Primary Diagnosis	September, 2014		September, 2018		P value
	Cases	Percentages	Cases	Percentage	
Anterior Wall MI	49.0	47.60%	75.0	64.70%	0.0810
Inferior Wall MI	40.0	38.80%	31.0	26.70%	0.1800
Lateral Wall MI	3.0	2.90%	1.0	0.80%	0.1240
Myocardial Infarction (MI)	103.0	28%	116.0	26%	0.4510
Others	11.0	10.70%	7.0	6%	0.1010
Acute Coronary Syndromes	150.0	39.80%	192.0	43%	0.3420
Atrial Fibrillation/Flutter	2.0	8.30%	5.0	16.70%	0.1320
Cardiomyopathy	11.0	28.20%	4.0	6.70%	0.0510
CHF	6.0	15.80%	7.0	11.60%	0.0900
Cardiogenic shock	1.0	2.60%	4.0	6.70%	0.1000
CHB	8.0	33.30%	10.0	33.30%	0.6220
Dysrhythmias	24.0	6.40%	30.0	6.70%	0.1920
Heart Muscle Disease	39.0	10.30%	60.0	13.50%	0.2400
LBBB	6.0	25%	4.0	13.30%	0.0710
LVF	22.0	56.40%	45.0	75%	0.0620
NSTEMI	10.0	6.70%	22.0	11.50%	0.0820
RBBB	6.0	25%	3.0	10%	0.1210
Unstable Angina	140.0	93.30%	170.0	88.50%	0.0910

Others	2.0	8.30%	8.0	26.70%	0.0990
Mixed Lesion	13.0	56.50%	6.0	25%	0.0420
MS	3.0	13%	4.0	16.70%	0.3010
MR	3.0	13%	4.0	16.70%	0.2320
SBE	1.0	4.30%	7.0	29.10%	0.0010
Valvular Heart Disease	23.0	6.10%	24.0	5.40%	0.4230
Others	3.0	13%	3.0	12.50%	0.4520
Congenital Heart Disease	2.0	0.50%	4.0	0.80%	0.3200
Coronary artery disease	27.0	6.52%	8.0	1.70%	0.0980
Pericardial Effusion	1.0	0.24%	1.0	0.20%	0.6410
Pericarditis	1.0	0.24%	0.0	0%	-
Uncontrolled Hypertension	7.0	1.90%	11.0	2.50%	0.1610



Status	Sep, 2014		Sep, 2018	
	No	%age	No	%age
Discharged	397.0	95.90%	436.0	97.75%
Deceased	14.0	3.40%	3.0	1.30%
L.A.M.A	3.0	0.70%	4.0	0.95%

LAMA = Leave against medical advice



DISCUSSION:

NICVD is an acute cardiac care facility in Karachi. It caters the patients from whole country especially interior areas of Sindh. The outcome of this research work displays that the number of patients in the both groups are close to each other in two months of different years at a distance of 5 years. Most of the patients were male, Showing high occurrence of CVD in the male sex. Previous research works concluded that male sex is a danger factor for the CVD [11, 12]. The outcomes of this research show that CVD occurrence in females is high now a day. Jafar [13] has concluded a large weight of many CVD danger elements in females as compared to males in our country Pakistan. The great amount of the male participants shows that males take preference in getting the medical treatment in our community which is male dominated.

Most of the patients were in their 5th, 6th and 7th decade of their lives. Large number of these patients belongs to 6th decade of their lives. ACS (acute coronary syndromes) includes the majority of occurrence in both of the data sets. Males patients were large in number than females. Shahid M [14] also concluded the large quantity of the ACS patients were males who were in young age. These results are similar to the outcome of this research work. The high number of the patients suffering of ACS in recent times in contrast to five years' previous research shows the increasing occurrence of this state. MI of external and internal wall was the most frequent in the patients of MI. Most of the participants were in their 5th and 6th decade of their lives. Saleheen D [15] in his research work carried out in Karachi concluded that most of the participants

suffering of MI had the age of more than forty-five years. This outcome is similar the result of this research work. We recognized a remarkable increase in the patients suffering of heart muscle diseases in the previous five years. There were forty-five LV failures in September 2018 and there were only twenty-two LV failures in September 2014.

The patients suffering of dysrhythmias had the highest average age as most of the patients were more than fifty-five year of age. Almas A [16] concluded the average age of the patients suffering of ventricular tachycardia was 57.06±11.84 years. This result is similar to the outcome of our research work. The patients suffering of VHD (valvular heart disease) had the lowest average age. The number of patients suffering of this disease was same in both data sets. Female were larger in quantity than males in case of this disease. The quantity of the patients of bacterial endocarditis was one in September 2014 but it increased to six in the September of 2018. Most of the patients suffering of these were also females showing the high occurrence of this state in the women of our population. In September 2014, 14 patients died due to CVD & 6 patients died in the month of September 2018. This disparity in the death rates is due to the good administration of CVD now as compared to previous times.

CONCLUSION:

This research work proved that the designs of CVD had not changed in remarkable quantity in previous five years. It is very necessary to know about the causes and development of different CHD to conclude the occurrence in our populations.

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