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Research Article

**STUDY TO KNOW THE FREQUENCY OF VARIOUS  
CARDIOVASCULAR DISEASES PATIENTS ADMITTED IN  
TERTIARY CARE HOSPITAL AND ITS CONSEQUENCES**<sup>1</sup>Dr. Sohaib Shabbir, <sup>2</sup>Dr. Muhammad Awais Mahmood<sup>1</sup>Medical Officer, DHQ Hospital Chiniot<sup>2</sup>BHU 348 JB Gojra, Toba Tek Singh**Abstract:**

**Objective:** In order to allocate our resources and plan preventive strategies, we need to know the frequency of the various diseases of the heart. This study was conducted to determine the frequency of various cardiovascular diseases in a section of our population.

**Study Design:** A cross Sectional Study.

**Place and Duration:** The Study was conducted at the Rawalpindi Institute of Cardiology, Rawalpindi for the period of one year from April 2016 to April 2017.

**Materials and Methods:** All adult patients were included and continued to the pediatric department and the patients were excluded from the study. Demographic data such as age and gender were recorded for all patients. Patients were categorized as patients with ischemic heart disease (IHD), hypertension (HTN), heart valve disease (HVD) or various disorders (arrhythmia, ischemic cardiomyopathy or other rare cardiovascular disease). According to protocols based on standard guidelines, different diseases were diagnosed.

**Results:** A total of 721 patients were studied; 54.64% (394) male and 45.36% (327) female. The mean age of the patients was  $51.47 \pm 12.97$ . 404 (56%) patients were diagnosed with HHD in general; 254 (64.5%) men and 150 (45.9%) women. the second most common variety of diseases was observed in 21.5% and was equal in both genders. More women were hypertensive and had heart valve disease compared to men (13.1% 8.6% and 4.6% vs 15.9% vs%). Patients with adult congenital heart disease were 2.1% (2.4% female and 1.8% male). Different illnesses are more likely to be seen in different age groups.

**Conclusion:** Ischemic heart disease is the most common cardiovascular disease and affects men more frequently; Hypertension and valve heart disease are the second most common disorders and affect women preferentially. Patients with different and congenital diseases are identical in both cinsteins. While the incidence of ischemic heart disease and hypertension is unchanged, the incidence of heart valve disease, congenital heart disease and various cardiovascular diseases has decreased by two percent.

**Keywords:** Cardiovascular diseases, outpatient department.

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**INTRODUCTION:**

Cardiovascular diseases are the leading cause of death worldwide and, more importantly, in the developing world. Deaths related to cardiovascular diseases occur in eighty percent of low- and middle-income countries and are seen at younger ages than in high-income countries<sup>1</sup>. Women, however, develop coronary heart disease more than men after ten years.<sup>2</sup> In European countries, IHD is more common and men are likely to suffer 2-3 times more suffering than women.<sup>3</sup> Hypertension causes approximately 9.4 million people to die each year in the world (HTN), one of the most important causes of premature death is the problem [4]. Hypertension is also an important risk factor for heart disease<sup>5</sup>. By 1990 data, HTN decreased; However, it shows that the end-point is increasing again. The prevalence of valvular heart disease (VHD) is lower than in other cardiovascular diseases, but heart valve disease has become a problem that has evolved since 1999-2002, 28.6%<sup>6</sup>, and about 30% in 2005-2005. Most studies have shown that there may be gender differences in the etiology and treatment of the disease.<sup>7</sup> This study provides information on the prevalence of various heart diseases among patients referred to the outpatient clinic (OPD). ); This information is useful both for the development of the health care system and for the care of patients. Information on the relative frequency of various cardiac diseases is important to plan preventive strategies and to allocate resources for the treatment of different cardiovascular diseases.

**MATERIALS AND METHODS:**

This cross-sectional study conducted at the Rawalpindi Institute of Cardiology, Rawalpindi for the period of one year from April 2016 to April 2017. RIC is a tertiary hospital with a large basin area in a metropolitan city. Patients aged 17-84 years included in both sexes (age recorded in data collectedF). Patients who applied outside the pediatric clinic were excluded from the study. Previously worked and new

cases were recorded. Data were collected for each patient via interview, clinical examination and current patient records. The characteristics of the patients were recorded, ie, sex and age. We diagnosed a group of patients with ischemic heart disease (IHD), hypertension (AHT), heart valve disease (VHD), congenital heart disease (CHD), or various disorders with rhythm disorders, heart-miopathy other nonischemic cardiovascular diseases or patients. CI was diagnosed based on history, suggesting ischemic ECG (S significant waves, ST deviation, T wave inverse or LBBB), coronary angiography, echocardiography and blood change. CHD and VHD were placed clinically and by echocardiography. If hypertension (AHT) was history, systolic and systolic, or if the patient was antihypertensive, blood pressure should be pre-registered using 90 mm Hg diastolic 140 mmHg. Patients with both IHD and HTN were grouped as IHD patients. Statistical analysis: Statistical analysis was performed with SPSS version 20.0. Categorical variables such as IHD, gender, CHD, VHD, HTN and Miscellaneous were reported as frequency and percentage. Chi-square statistic was applied to observe the relation of categorical variables with gender. P value  $\leq 0.05$  was considered significant. The test was performed as two queues.

**RESULTS:**

A total of 721 patients were studied (390 in July 2013 and 331 in February 2015). Of the 721 patients, 54.65% (394) were male and 45.35% (327) were female. The age range of the patients was 17-84 years, the mean age was  $51.47 \pm 12.97$ . The distribution of several disease groups is shown in FIG. When we look at the frequency of several cardiovascular diseases in 2013 and 2015, IC and HTA remained the same but showed a significant decrease in the number of cardiovascular disease cases. ECC, VHD. and patients with various cardiac diseases (table 1).

**Table-1: year-wise frequency of different diseases.**

DIAGNOSIS	HTN	IHD	VHD	MIS	CHD	TOTAL	
YEAR	2016	33(42.9%)	209(51.7%)	49(70.0%)	89(57.4%)	10(66.7%)	390(54.1%)
	2017	44(57.1%)	195(48.3%)	21(30.0%)	66(42.6%)	5(33.3%)	331(45.9%)
TOTAL	77(100.0%)	404(100.0%)	70(100.0%)	155(100.0%)	15(100.0%)	721(100.0%)	
P-Value	0.0567	0.0632	0.001	0.034	0.004		

In males IC 254 was more common in women compared to 254 (45.9% versus 64.5%, p value <0.005) Table 2; However, VHD and HTN were significantly higher in women than in men.

**Table-2: Disease pattern with respect to gender.**

Diagnosis	Gender		P-value
	Male n(%)	Female n(%)	
HTN	34(8.6)	43(13.1)	0.001
IHD	254(64.5)	150(45.9)	
VHD	18(4.6)	52(15.9)	
MIS	81(20.6)	74(22.6)	
CHD	7(1.8)	8(2.4)	

Patients with different incidents and CHD were equally distributed in both genders. While there was an increase in HTN and IHD in women, there was a decrease in VHD, CHD and various incidence in 2015 (Table 3).

**Table-3: Distribution of diseases with respect to gender and study year.**

Gender		Year	Diagnosis					Total	P-value
Male	Female		2013	2015	2013	2015	2013		
		2013	24(70.6%)	142(55.9%)	10(55.8%)	49(60.5%)	4(57.1%)	229(58.1%)	0.571
		2015	10(29.4%)	112(44.1%)	8(44.4%)	32(39.5%)	3(42.9%)	165(41.9%)	
		2013	9(20.9%)	67(44.7%)	39(75.0%)	40(54.1%)	6(75.0%)	161(49.2%)	0.001
		2015	34(79.1%)	83(55.3%)	13(25.0%)	34(45.9%)	2(25.0%)	166(50.8%)	

The disease pattern in different age groups (Table 4) showed that IC was more common in 51-60 years (32.8%). In the 41-50 age group, HTN was the most common (34.1%) and VHD was more frequent in the 21-30 age group. Patients with CHD were very few and were distributed between 20 years and 50 years. A variety of cases were between 30 and 50.

**Table-4: Distribution of different diseases according to age group in the year 2016-2017.**

Age groups (years)	Diagnosis					Total	P-value
	HTN	IHD	VHD	MIS	CHD		
< 20	0	0	1(4.8%)	2(3.0%)	1(20.0%)	4(1.2%)	0.002
21-30	0	3(1.5%)	6(28.6%)	11(16.7%)	1(20.0%)	21(6.3%)	0.001
31-40	8(18.2%)	16(8.2%)	4(19.0%)	15(22.7%)	1(20.0%)	44(13.3%)	0.156
41-50	15(34.1%)	59(30.3%)	5(23.8%)	15(22.7%)	1(20.0%)	95(28.7%)	0.655
51-60	11(25.0%)	64(32.8%)	3(14.3%)	16(24.2%)	0	94(28.4%)	0.1509
61-70	10(22.7%)	44(22.6%)	1(4.8%)	6(9.1%)	1(20.0%)	62(18.7%)	0.024
71-80	0	7(3.6%)	0	1(1.5%)	0	8(2.4%)	0.5412
81-90	0	2(1.0%)	1(4.8%)	0	0	3(9%)	0.333
Total	44(100.0%)	195(100.0%)	21(100.0%)	66(100.0%)	5(100.0%)	331(100.0%)	

**DISCUSSION:**

Cardiovascular diseases are the leading cause of death worldwide and, more importantly, in the developing world. Cardiovascular disease-related deaths occur in eighty percent, medium and low-income countries, and occur at younger ages than in high-income countries. To allocate our resources and plan preventive strategies, we must know the spectrum of major cardiovascular diseases in our population. As expected in our study, there are a greater number of symptomatic CAD patients. There were 64.5% of men and 46% of women among men. IC prevalence in our country is 6.25%; In our study, 8% and 5% of men observed that 8 males and females were in similar proportions. The situation in India is between 3.7% and 9.4%. 10% for females and 3.4% -9.5% -10.5% for males. A report by the American Heart Association in 2008 showed that IC prevalence in males is higher than in females (8.3% in males and 6.1% in females). Very few patients (2.08%) in our study suffered from CHD. Since we exclude the pediatric age group, this does not represent the real problem. Gender differences are also present in our patients with congenital heart disease. More women are suffering from this disease. 7 patients (46.66%) were male and 8 patients (53.34%) were female in 15 patients. Abbag showed similar results in Saudi Arabia, where the male to female ratio is 0.9: 1, 48.35% for males and 51.64% for females. In our study, 8.6% of male patients and 13.1% of women had a hypertensive, statistically significant difference. Since this figure is treated under the title of patients with ICH, hypertensive patients with IHD are taking this situation in their actual situation. Gupta and colleagues showed that hypertension was slightly higher in women (48.4%) than in men (47.5%), as shown in our study. However, Yadav et al. They gave more information about hypertension in men (42.9% versus 34.2%). Hypertension was found in 10.7% of the patients who were treated remotely and various cardiovascular diseases group was found in 21.5%. Nisar and colleagues reported that the incidence of hypertension and various disorders were 8% and 32%, respectively. As in Pakistan, there are 2,000 million children under the age of 15 living in endemic areas in areas of rheumatic heart disease<sup>16</sup>. In our study, about 10% of patients are mostly rheumatic, valvular. However, we may have excluded a smaller pediatric patient than the actual number. Our women have more heart disease than the valve. Shrestha et al. Found more female patients with valvular heart disease (rheumatic); According to my study, 1055 women were compared with the prevalence of 658 men and 30-49 year olds<sup>17</sup>.

**CONCLUSION:**

Ischemic heart disease is the most common cardiovascular disease and affects men more. often; Hypertension and valve heart disease are the second most common disorders and affect women preferentially. Patients with different and congenital diseases are identical in both cinsteins. While the prevalence of valvular heart disease, congenital heart disease and various cardiovascular diseases decreased in two years, ischemic heart disease and hypertension remained the same.

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