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STUDY ON HEART FAILURE PROFILE OF PATIENTS PRESENTING AT BAHAWALPUR VICTORIA HOSPITAL

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ABSTRACT

Objective: To assess the heart failure profile of patients presenting at Bahawalpur Victoria Hospital. **Material and methods:** This cross sectional study was conducted at Outpatients Department of Bahawalpur Victoria Hospital, from January 2019 to June 2019 over the period of 6 months. Total 1000 patients presented with symptoms and signs of heart failure according to Framingham criteria either male or female and having age >20 years were included. **Results:** In present study mean age of the patients was 50.70±14.8 years. Male patients were 644 (64%) and female patients were 356 (36%). Most of the patients belonged to age group 51-60 years. Total 544 (54.4%) patients were hypertensive, obese were 105 (10.5%) smokers were 417 (41.7%). Ischemic heart disease was the most common (586/58.6%) etiology. **Conclusion:** Findings of this study showed that male were more victim of heart failure as compared to female. Age group 51-60 years was the most commonly affected age group. It is also revealed that most of the patients were hypertensive and smokers. Ischemic heart disease was the most common etiology.

KEYWORDS: Ischemic Heart disease, diabetes mellitus, heart failure, anemia.

INTRODUCTION

Heart Failure (HF) is the common final pathway of most heart diseases, and is one of the major current clinical challenges in health.[1] Approximately 23 million individuals have HF, and 2 million new cases are diagnosed every year worldwide.[2] The prevalence of HF has been increasing in recent years worldwide and has become a serious public health problem.[3] The reasons for this include the aging of the population and therapeutic advances in the treatment of acute myocardial infarction (AMI), systemic arterial hypertension (SAH) and even HF, which increase survival and, consequently, promote an increase in its prevalence.[4-5]

Coronary artery disease is the main cause of CHF in developed world.[6] Heart failure is a common reason for urgent admission to hospital in the medical intensive care unit (MICU), and is a major cause of morbidity and mortality.[7] In 1950s rheumatic heart disease was the most common cause of heart failure even in developed countries.[8] The prevalence of CAD increased from 22% to nearly 70% in 1970s.

More than 5.8 million adults in the USA are living with HF.[9] This syndrome affects more men than women, and its prevalence greatly increases with advancing age.[9]

Studies estimate the overall prevalence of HF in the population to be about 2–3%.[10] From selfreported data obtained by the National Health and Nutrition Examination Survey, the prevalence in the USA was 2.6% in 2006.[8-10]

In-hospital mortality from HF has generally improved over time.[11] In ADHERE (Acute Decompensated Heart Failure National Registry), 263 hospitals reported an average hospital death rate of 4.2% in 2001–2003.[12] A study of nearly 7 million fee-for-service US Medicare patients hospitalized with HF showed that in-hospital mortality decreased from 8.5% to 4.3% between 1993 and 2006.[13] Part of the reduction in in-hospital mortality might have resulted from decreasing lengths of stay, which delays the accounting of these deaths into the post-hospitalization period.[12]

Purpose of the present study is to assess the heart failure profile in our hospital. Results of this study may guide us for early management of risk factor of the disease.

MATERIAL AND METHODS

This cross sectional study was conducted at Outpatients Department of Bahawalpur Victoria Hospital from January 2017 to June 2017 over the period of 6 months. An approval was taken from institutional review

committee and written informed consent was taken from every patients.

Total 1000 patients presented with symptoms and signs of heart failure according to Framingham criteria either male or female and having age >20 years were included. History of all the patients was and clinical examination was done. ECG and chest X-ray was taken of all the patients. Biochemical and echocardiographic examination was also done. Patients with history of kidney disease, patients with any lung disease and patients with chronic liver disease were excluded from the study.

RESULTS

In present study mean age of the patients was 50.70±14.8 years. Out of 1000 patients, male patients were 644 (64%) and female patients were 356 (36%). (Fig. 1)Selected patients were divided into 8 age groups. Total 11 (1.1%) patients belonged to age group <20 years followed by 86 (8.6%) patients belonged to age group 21-30 years, 186 (18.6%) belonged to age group 31-40 years, 181 (18.1%) belonged to 41-50 years group, 251 (25.1%) belonged to age group 51-60 years, 218 (21.8%) belonged to 61-70 years group, 52 (5.2%) belonged to age group 71-80 years and 15 (1.5%) belonged to age group >80 years. (Table 1)

Total 289 (28.9%) patients were diabetics, dyslipidemia was seen in 367 (36.7%) patients, 544 (54.4%) patients were hypertensive, obese were 105 (10.5%) smokers were 417 (41.7%) and anaemia was seen in 432 (43.2%) patients. (Table 2)

The etiologies of heart failure were antero-septal ST elevation myocardial infarction (AS STEMI) in 294 (29.4%) patients, inferior wall ST elevation myocardial infarction (IW STEMI) in 25 (2.5%), non ST elevation myocardial infarction (NSTEMI) in 83 (8.5%) patients, old myocardial infarction in 85 (8.5%) patients, and post CABG in 26 (2.6%) patients.

Total numbers of ischaemic heart disease (IHD) patients were 586 (58.6%). Other causes of heart failure were hypertension in 117 (11.7%), valvular heart disease in 147 (14.7%), hypertrophic cardiomyopathy (HCM) in 24 (2.4%), idiopathic dilated cardiomyopathy in 29 (2.9%), peripartum cardiomyopathy in 4 (0.4%), myocarditis in 11 (1.1%), constrictive pericarditis in 13 (1.3%), antineoplastic drugs in 6 (0.6%), post pacemaker implantation in 21 (2.1%), corpulmonale in 20 (2.0%) and congenital heart disease in 22 (2.2%). (Table 3)

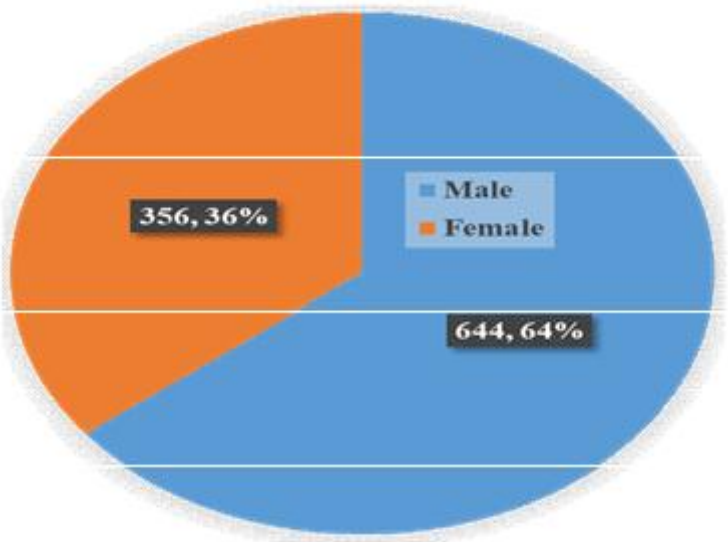

Fig. 1: Gender Distribution.

Table 1: age distribution of patients.

Age group (years)	Total	%
< 20	11	1.1
(21-30)	86	8.6
(31-40)	186	18.6
(41-50)	181	18.1
(51-60)	251	25.1
(61-70)	218	21.8
(71-80)	52	5.2
>80	15	1.5
Total	1000	100

Table 2: Frequencies for different parameters.

Variable	N	%
AS STEMI	294	29.4
IW STEMI	25	2.5
NSTEMI)	83	8.5
Old myocardial infarction	85	8.5
Post CABG	26	2.6
IHD	586	58.6

Table 3: Etiology of heart failure.

Variable	N	%
Diabetes mellitus	289	28.9
Dyslipidemia	367	36.7
Hypertension	544	54.4
Obesity	105	10.5
Smokers	417	41.7
Anaemia	432	43.2

DISCUSSION

HF is one of the leading causes of hospital admission in the world.[14] Data from the literature show that approximately 1 to 2% of the adult population in developed countries has HF, with a higher prevalence (≥ 10%) in the elderly older than 70 years.[15] The American Heart Association has estimated a prevalence of 5.1 million individuals with HF only in the United States, from 2007 to 2012.[16]

The incidence of a first hospitalization for HF in a study carried out in France in 2009 was 0.14%.[17] A recent North-American study observed a reduction in the hospitalization rate for HF, as well as another study carried out in Canada, which analyzed inpatients and outpatients from 1997 and 2007, showing a 32.7% decline in the incidence of HF cases.[18]

In Brazil, a reduction in the number of hospitalizations due to HF from 2000 to 2007 was also identified, with a proportional decrease in all geographic regions.[19] The incidence and rates of hospital admission for HF have steadily declined since the 1990s in several countries worldwide, and this seems to reflect a real decrease in HF, which can be explained by lower rates of smoking, better SAH control and greater use of reperfusion therapies, such as primary angioplasty.[18]

In present study cardiogenic shock was present in 8.4% patients and the most important cause was STEMI. Present study showed 46.3% of HF patients had normal or preserved EF and most important cause was HTN in 28.74% and valvular heart disease in 30.71%, unstable angina in 14%, NSTEMI in 11% and HCM in 5.8%. This is consistent with many published data except higher incidence of valular heart disease in present data.[20-21] This is probably because of higher prevalence of RHD in india.[20] Noncompliance with diet and medication (23.8%) was an important precipitating factor for HF. Joshi PP al also showed noncompliance issues and infections constituted 27.2% of precipitating factors.[22-23] Presence of anaemia renal dysfunction and hyponatremia in present data are consistent with many published data.[24-25] In present study isolated right sided HF was present in 4.2% of patients which was similar to study by L Veronique et al.[26] Due to high prevalence of complete heart block in eastern india and most of the implant patients have VVI pacemaker, post permanent pacemaker (alIVVI) HF patients was 2.1% in present study.

CONCLUSION

Findings of this study showed that male were more victim of heart failure as compared to female. Age group 51-60 years was the most commonly affected age group. It is also revealed that most of the patients were hypertensive and smokers. Ischemic heart disease was the most common etiology.

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