Original Research Article

Clinical profile in congestive heart failure patients

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Abstract

Background: HF is a growing cause of hospitalization around the world with a lifetime risk of 1 in 5. HF can originate from CAD, high blood pressure, rheumatic heart disease, or other causes like cardiomyopathies, congenital heart disease, endocarditis and myocarditis. It is still a common reason for urgent admission to hospital and a major cause of morbidity and mortality. **Amis and Objectives:** To study the Clinical profile in congestive heart failure patients **Materials and Method:** In the present study total 60 patients of congestive cardiac failure were selected. All the patients fulfilled the Framingham's Criteria for Congestive Heart Failure (CHF) were selected. A structured proforma was designed to capture information on clinical profile of the patients and validated in the pilot study. The proforma consisted information on demographic, anthropometric and clinical data. **Results:** It was seen that the number of patients increases as the age increases for both male and female sex. Maximum number of cases occurred in fifth and sixth decade. 60 patients were included in the study were diagnosed to have congestive cardiac failure based on Framingham's Criteria. 40 were males and 20 were females. Dysponea on exertion (91.67%) was the most common clinical feature observed followed by Neck vein distension (68.33%), Night cough (48.33%) and Extremity edema (46.67%). **Conclusion:** Thus we conclude that the congestive heart failure patients were increasing as the age increases. Dysponea on exertion, Neck vein distension, Night cough and Extremity edema were the most common clinical feature observed. Ischemic heart disease, cardiomyopathy, valvular heart diseases were major etiological diagnosis in the present study.
Key Words: congestive heart failure, Dysponea on exertion, Ischemic heart disease

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INTRODUCTION

Heart failure (HF) is a major public health problem having a prevalence of over 5.8 million in the USA, and over 23 million worldwide[1]. HF is primarily considered as a condition of the elderly[2] with an incidence of 10 per 1000 population after age 65; while approximately 80% of patients hospitalized with HF are more than 65 years old[3,4]. The linear growth rate of HF is a sign of its increased prevalence due to population aging and advances in medical treatment. Recent statistics indicates that length of survival among the HF patients is increasing. This trend entails high costs for countries of which elderly population is on the rise[5]. HF is a complex syndrome, characterized by its inability to supply blood to cater the metabolic needs of tissues in the presence of normal filling pressures or being capable of doing it only at high filling pressures[5]. HF is a growing cause of hospitalization around the world with a lifetime risk of 1 in 5. HF can originate from CAD, high blood pressure, rheumatic heart disease, or other causes like cardiomyopathies, congenital heart disease, endocarditis and myocarditis. It is still a common reason for urgent admission to hospital and a major cause of morbidity and mortality. Most heart failure are associated with evidence of left ventricular systolic dysfunction, although diastolic impairment at rest is a common if not universal accomplishments. In most cases, diastolic and systolic heart failures should not be considered as separate

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pathophysiological entities. Diastolic heat failure is often diagnosed when symptoms and signs of heart failure occur in the presence of PLVEF (normal ejection fraction) at rest. Predominant diastolic dysfunction is relatively uncommon in younger patients but increase in importance in the elderly. PLVEF is more common in women, in whom systolic hypertension and myocardial hypertrophy with fibrosis are contributors to cardiac dysfunction.[6,7]

MATERIALS AND METHOD

The present study was conducted in the department of medicine of the tertiary care institute to evaluate the Clinical profile in congestive heart failure patients. In the present study total 60 patients of congestive cardiac failure were selected. All the patients fulfilled the Framingham's Criteria for Congestive Heart Failure (CHF) were selected. A structured proforma was designed to capture information on clinical profile of the patients and validated in the pilot study. The proforma consisted information on demographic, anthropometric and clinical data. Details of major cardiovascular risk factors such as smoking, alcohol intake, diabetes mellitus (DM), hypertension (HTN), ischemic heart disease (IHD), and hyperlipidemia were recorded. The physical examination included measurement of height, weight, waist-hip ratio (WHR) and blood pressure (BP). Height was measured in centimeters and weight in kilograms using a calibrated spring balance. The supine waist girth was measured at the level of the umbilicus (during quite breathing) and the standing hip girth was measured at the inter-trochanteric level. The collected data was entered in Microsoft excel and the data was presented with appropriate graphs and tables.

RESULTS

Table 1: Age and Gender distribution of cases

Age group (yrs)	Male	Female	No of cases
0-10	0	0	0 (0.00%)
11-20	1	0	1 (1.67%)
21-30	0	2	2 (3.33%)
31-40	0	2	2 (3.33%)
41-50	3	2	5 (8.33%)
51-60	12	6	18 (30.00%)
61-70	14	6	20 (33.33%)
71-80	9	2	11 (18.33%)
>80	1	0	1 (1.67%)
Total	**40**	**20**	**60 (100%)**

In the present study it was seen that the number of patients increases as the age increases for both male and female sex. Maximum number of cases occurred in fifth and sixth decade. 60 patients were included in the study were diagnosed to have congestive cardiac failure based on Framingham's Criteria. 40 were males and 20 were females.

Table 2: Number of patients according to clinical criteria

Clinical feature	No. of patients	Percentage
PND	11	18.33
Neck vein distension	41	68.33
Rales	21	35.00
Cardiomegaly	11	18.33
Acute pul edema	4	6.67
S_3 gallop	17	28.33
Increased venous pressure (>16 cm of water)	0	0
Positive hpatojugular reflux	18	30.00
Extremity edema	28	46.67
Night cough	29	48.33
Dysponea on exertion	55	91.67
Hepatomegaly	12	20.00
Pleural effusion	0	0
Vitral capacity decreased by 1/3 of N	0	0
Tachycardia >100/min	13	21.67

It was seen that Dysponea on exertion (91.67%) was the most common clinical feature observed followed by Neck vein distension (68.33%), Night cough (48.33%) and Extremity edema (46.67%).

Table 3: Major etiological causes for congestive heart failure

Etiology of heart failure	No. of patients	Percentage
Ischemic heart disease	24	40.00
Valvular heart disease	8	13.33
Cardiomyopathy	9	15.00
Constrictive pericarditis	1	1.67
Pericardial effusion without tamponade	0	0.00
Diastolic dysfunction	39	65.00
Congenital heart disease	0	0.00
Intracardiac tumour	0	0.00

It was seen that ischemic heart disease, cardiomyopathy, valvular heart diseases were major etiological diagnosis in study cases. Diastolic dysfunction was separate pathophysiological diagnosis in cases of congestive cardiac failure.

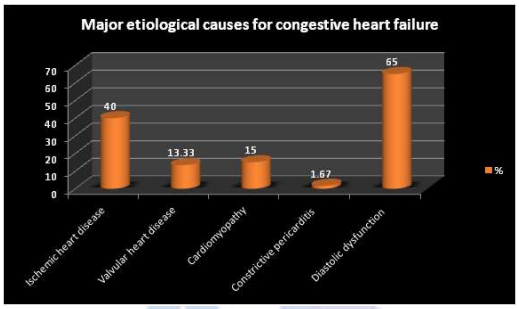

Figure 1: Major etiological causes for congestive heart failure

DISCUSSION

Heart failure (HF) is a growing cause of hospitalization around the world. With increase in both survival rate and prevalence of coronary artery disease (CAD), HF has gained epidemic proportions in developed country. The age and gender distribution in patients undergoing study with congestive cardiac failure shows, number of cases increases as age increases Maximum number of occurring above the age of 50. Among the study population male: female distribution was 2:1. The results of TM Reddy[8] also clearly indicate that the most susceptible for developing HF was > 60 years. The results were in best agreement with the findings from Framingham study.[9] It was seen that the percentage distribution of clinical criteria in the study population which suggests 'dyspnoea an exertion' (55%) followed by 'neck vein distension' (41%) and night cough (29%) and edema on extremity (28%) are the common clinical features in the study population in the decreasing order of frequency. In the study carried out by Euro heart failure survey almost 40% of patients presented with acute breathlessness while in additional 35% presented with some other manifestation of worsening heart failure such as increasing edema or exertional breathlessness. In the study conducted by Dubey *et al.*[10] the commonest presenting symptom was shortness of breath (81%) followed by leg swelling (56%) and fatigue (23%).The commonest sign was bilateral basal crepitations (68%), peripheral edema(42%), elevated jugular venous pressure (34%), and hypotension (Systolic Blood Pressure < 90 mmHg) in 25%. Dyspnoea and edema were the predominant symptoms besides fluid overload with which the patients presented themselves to the hospital as observed by ADHERE study and Euro Heart Failure survey. This establishes the primacy of breathlessness, as a presenting symptom of Heart failure. The cardinal symptoms of HF were shortness of breath and fatigue that occur either with rest and/or with exertion[11]. Hence, elucidating the history and physical examination to determine whether the patient is in natural history of syndrome or will have sizeable effect in offering treatment. Nonproductive cough was the next most prevalent symptom, which is a dyspnoea equivalent and may suggest LVD[12]. Cough was present in 57.7% of patients in the present study against 69% in a US National Health Interview Survey[12]. The other importantsymptom was palpitation. This may be a presenting symptom in patients with decompensated HF. The character of palpitation may serve to identify the nature of underlying arrhythmias. Sensation of pauses and skipped or forceful beats suggest premature atrial or ventricular complexes. Rapid palpitations can be irregular as with atrial arrhythmias, such as atrial flutter, fibrillation or tachycardia or regular suggesting sinus supraventricular, or ventricular tachycardia. Arrhythmias are well known precipitants of HF (especially AF) and in the present study arrhythmias were seen in 26.9% and AF in 19.2% of patients. In the present study, chest pain was found in 34 6% of patients. Fatigue was another common complaint in patients with HF. Evangelesta., *et al.*[13] study

observed 50.4% of men and 51.2% of women with heart failure reported with fatigue. In present study, causes of congestive cardiac failure in the decreasing order of frequency were diastolic dysfunction (demonstrated with the use of 2D ECHO), (39 out of 60), ischemic heart disease (24 out of 60), cardiomyopathies (9 out of 60), valvular heart disease (8 out of 60), constrictive pricarditis (1 out of 60). Use of 2D ECHO and colour Doppler echocardiography has enabled us to access the pathophysiologic basis a heart failure. In the study, 12 patients had an abnormal ECG in the form of arrhythmias 3, Q waves of previous AMI 3, left ventricular hypertrophy 3, left bundle branch block 2. Cardiovascular abnormalities at the time of admission for patients enrolled in the Euro heart failure survey was of following order-acute breathless other deterioration of heart failure (30-40%), stable heart failure (24%), acute ms/unstable angina (18%), rapid atrial fibrillation (81%), asymptomatic cardiac dysfunction (5%), ventricular arrhythmia (3%), cardiogenic shock (1%), cardiac arrest (1%). Preliminary report indicates that only 3% of ECGs appeared normal, chest x-ray showing cardiomegaly or pulmonary congestion or both in 71% of cases. In the study conducted by Dubey *et al.*[10], CAD leading to HF was found in 93 (36.5%) patients. Rheumatic heart disease leading to valvular lesion and HF in 65 (25.5%), dilated cardiomyopathy in 37 (14.5%), hypertensive heart failure in 22 (8.6%) and HF due to congenital heart disease was found in 7 (2.7%) patients. Although, HF due to cor-pulmonale is not usually advised to be admitted in cardiology department, 31 (12.2%) patients were admitted for the management of HF due to cor-pulmonale. HF is a progressive clinical syndrome originating from a cardiac disorder. The ability of the heart to pump blood is impaired and fails to meet the metabolic demands of the body.[1,14] This is mostly caused by impaired ventricular relaxation and filling during diastole, ventricular contractile dysfunction during systole, or a combination of both. Based on being systolic or diastolic, HF is divided into two major categories. Preserved systolic function can be seen in approximately twenty to fifty percent of incident cases of HF,[15,16] which could be missed if diagnostic measures are not taken in clinical practice.[1,17]

CONCLUSION

Thus we conclude that the congestive heart failure patients were increasing as the age increases. Dysponea on exertion, Neck vein distension, Night cough and Extremity edema were the most common clinical feature observed. Ischemic heart disease, cardiomyopathy, valvular heart diseases were major etiological diagnosis in the present study.

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