



STUDY OF TREATMENT OUTCOMES OF DRUG THERAPIES USED IN HEART FAILURE PATIENTS

Pharmaceutical Science

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ABSTRACT

To study the treatment outcomes of drug therapies used in heart failure patients with comorbidities. **Methodology:** The retrospective observational study was carried out for 6 months in aAditya Multispeciality hospital in cardiology department on heart failure patients. A total number of 200 patients case sheets were collected including inclusion and exclusion criteria. The patients demographic details such as age, gender, social habits and co morbid diseases was collected, patients above 18 years of age both males and females who were diagnosed with heart failure was included in the study. Patients with other co morbid diseases like renal and liver diseases were excluded i.e., patients rather than diabetes and hypertensionall the other co morbid conditions were excluded in the study. In the study patients was divided into some groups saying patients with only heart failure, patients with heart failure and hypertension, patients with heart failure and diabetes and patients with both diabetes and hypertension and several sub divisions and so on. **Conclusion:** By this study we concluded that heart failure is a public health burden, along with substantial consequences for the public health care and population. Patients are distributed according to age i.e., at 56-65 years age males are more affected than females, in gender wise distribution males are more prone to the disease than females. Fewer are habitual to alcohol and smoking but most of the patients are non consumers coming to comorbid conditions patients with hypertension are more likely to have heart failure followed by diabetes. Statins and diuretics are key drugs to acute therapy. Statins are prescribed to 70% of patients followed by PPIs to 53.6% patients and so on.

KEYWORDS

DCMP, CHF, RHF, AWMI, IWMI, NSTEMI, CAD, PTCA, CABG

INTRODUCTION

The heart enable to pump sufficient oxygen rich blood to meet requirements of body needs that means the body doesn't work properly without required blood and it may lead to improper functioning of body.

Heart failure can be on right or left or both at the same time. It may be either acute[short-term] or chronic [long-lasting]. In right side heart failure heart is weak and enableto pump sufficient blood to the body to get oxygen. In left side heart failure heartcannot pump enough oxygen-rich blood to the body this occurs when the heart become sthick to fill with blood. It is also known as congestive heart failure, muscles of heart doesn't pump blood as it has to be, it results in backs up and fluid build up of blood in lungs which cause shortness of breath. In some conditions like coronary artery disease or high blood pressure it leaves heart in weak or stiff condition to pump blood properly.

MATERIALSANDMETHODS

Study site:

The present study was conducted at Aditya multi-speciality hospital (Hanamkonda, Warangal, and Telangana, India).

This objective is situated at the start of city with basic objective of providing pharmacological and non-pharmacological management of elderly patients.

Study-design:

A Hospital based cross-sectional observational study.

Study-period:

The study was carried at for period of 6 months (July 04- 2022- December 03-2022).

Study-sample Size:

The study was conducted on 150 patient's single center

Study criteria

Inclusion Criteria

- Patients with chronic heart failure.
- Above 18 years both male and female.

- Patients with hypertension and diabetes.

Exclusion Criteria

- Patients with renal and hepatic problems.
- Patients with any other co morbid diseases rather than hypertension and diabetes.

Study Procedure

- Follow up is taken from the patients who are visiting clinic.
- Collecting demographic details of patients such as age, gender, social habits and co morbid diseases.

Source Of Data

Patients
Patients case reports
Prescriptions
Lab technicians
Patient care takers

Data Collection Forms :

A form including patient personal details like name, age, gender, address and phone number and medical history like past medical history, present illness and co morbid conditions are filled and submitted

Statistical Method:

Statistical analysis was performed using Microsoft office excel to determine the most probabilityof people affected on the basis of age, gender, locality, cause, co-morbidities wise distribution.

Data Collection Forms:

A form including patient personal details like name, age, gender, address and phone number and medical history like past medical history, present illness and co morbid conditions are filled and submitted

Informed Consent Form:

Patients inform consent form was prepared and it consists of description of the study. Theinformed consent form was obtained from

patients who are met in inclusion criteria and were enrolled in this study.

RESULTS AND DISCUSSION

1. Age Wise Distribution

Table 1: Distribution Of Patients According To Age

AGE	MALE	FEMALE
16-25	1	1
26-35	5	3
36-45	6	4
46-55	26	11
56-65	37	24
66-75	24	15
76-85	4	3

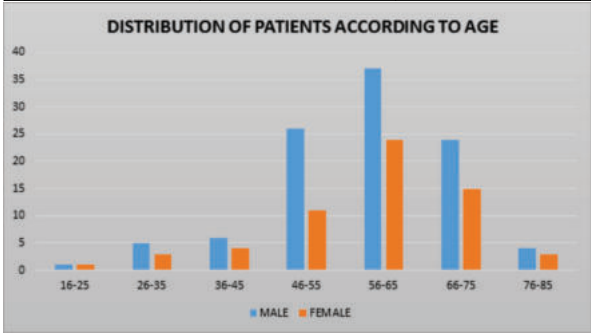


Fig 6: Distribution Of Patients According To Age

Table 1 and figure 6 shows that age wise distribution of patients in which male are more prevalence than female, At age group of 56-65 years patients are at higher risk of congestive heart failure among them male are more prevalent than female followed by age group of 46-55 years males are high when compared to females of same age group and age of 66-75 also repeated same that males are more affected ten females, remaining age groups of 26-45 years males are at slightly more than females, and age group of 76-85 years males are at least risk of congestive heart failure.

Gender Wise Distribution

Table 2: Gender Wise Distribution

Male	Female
103	61

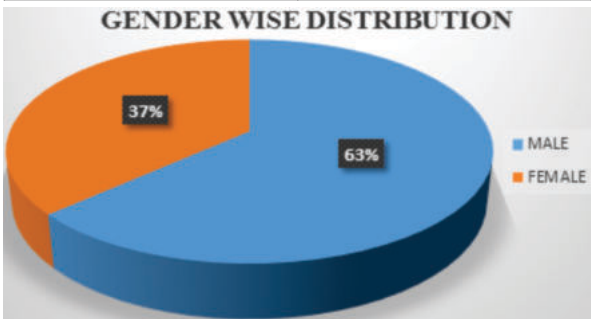


Fig 7: Gender wise distribution

Table 2 and Figure 7 shows that gender wise distribution of congestive heart failure in which males are at higher risk of the disease than females, 103 male patients (63%) are affected and 61 female patients (37%) are affected due to heart failure

Social Habits



Fig 8: Social habits

Table 3: Social Habits

SOCIAL HABITS	NO OF PATIENTS
Non consumers	150
Alcoholic	11
Smoker	1
Alcoholic + Smoker	2

Table 3 and figure 8 shows that social habits in heart failure patients, in which 150 patients (91.4%) are non consumers of alcohol and smoking, 11 patients (6.7%) are alcoholic, 1 patient (0.6%) smoker and 2 patients (1.2%) are both alcoholic and smoker by this we came to known that alcohol and smoking conditions have a little risk for heart failure and non consumers are more at risk of heart failure.

4.Comorbid Conditions

Table 4: Comorbid Conditions

COMORBID CONDITIONS	NO OF PATIENTS
HTN	45
DM	16
HTN + DM	43
No comorbid conditions	55



Fig 9: Comorbid conditions

Table 4 and figure 9 shows that patients with other comorbid conditions along with heart failure they are hypertension and diabetes, study included 159 patients in which 45 patients (28.3%) are suffering with hypertension along with heart failure, 16 patients (10%) are suffering with diabetes along with heart failure, 43 patients (27%) are suffering with both hypertension and diabetes and followed by 55 patients (34.5%) are with no comorbid conditions (hypertension and diabetes) and 5 patients re with other comorbid conditions like renal and liver problems they are excluded.

5. Class Of Drugs

Table 5: Class Of Drugs

CLASS OF DRUGS	NO OF PATIENTS
Statins	115
Proton Pump Inhibitors	88
NSAIDS	63
Anti-platelets	58
Diuretics	51
Beta blockers	45
Blood thinners	39

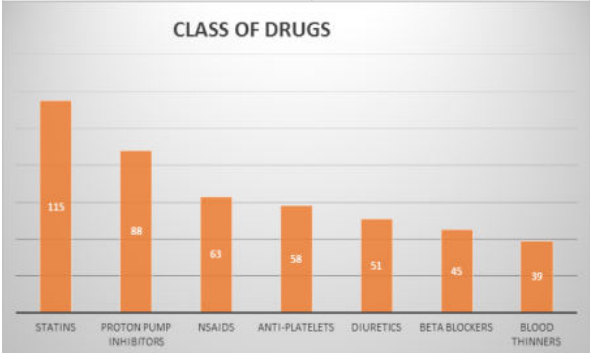


Fig 10: Class Of Drugs

Table 5 and figure 10 shows that class of drugs prescribed to heart failure patients in which statins are prescribed to 115 patients (70%) and are mostly used drugs in congestive heart failure, followed by proton pump inhibitors given to 88 patients (53.6%) are subsequently

used further more 63 patients (38.4%) are prescribed with NSAIDs, then 58 patients (35.3%) are given with anti-platelets, 51 patients (31%) are given with diuretics, 45 patients (27.4%) are prescribed with beta blockers and finally 39 patients (23.7%) are given with blood thinners.

CONCLUSION

- By this study we concluded that heart failure is a public health burden, along with substantial consequences for the public health care and population.
- Patients are distributed according to age i.e., at 56-65 years age males are more affected than females, in gender wise distribution males are more prone to the disease than females.
- Fewer are habitual to alcohol and smoking but most of the patients are non consumers coming to comorbid conditions patients with hypertension are more likely to have heart failure followed by diabetes.
- Statins and diuretics are key drugs to acute therapy.
- Statins are prescribed to 70% of patients followed by PPIs to 53.6% patients and so on

LIMITATIONS

- We are aware of the limitations of this study. We know that a small sample size introduces statistical error into the study.
- Some of the variables that enrich the research are missing, such as registration of diagnostic categories on admission

Future Directions

We performed a retrospective study on treatment outcomes of drug therapies in heart failure, in the study the main outcome was observed that statins (70%) are mostly prescribed drug to heart failure patients. Further more study can be done on individual drug, its interactions with other drugs and food, medication adherence is a vital part in treatment of heart failure and it is also important to study medication adherence in heart failure patients. As per our study we observed that most of the patients with heart failure have done with coronary angiogram(CAG), percutaneous transluminal coronary angioplasty(PTCA), coronary artery bypass graft(CABG) you can study on this too.

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