R e s e a r c h   A r t i c l e

Study of Comparision between Effectiveness and Tolerance of Angiotensineii Receptor Blockers and Betablockers in Cardiovascular Diseases

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A b s t r a c t

AIM: The Aim of the study was to compare the Effectiveness and Tolerance of Angiotensin II Receptor Blockers and Beta - Blockers In Cardiovascular Diseases. Objectives: To find out Adverse drug reactions in treatment. To evaluate drug-drug interactions. To find out further complications. To access adherence of medications. To find out the tolerance of medication chart to determine safe and effectiveness of patients. **Methodology:** A hospital-based comparative study was carried out for 6 months at single center Warangal, Telangana, India. patients were enrolled in the study based on treatment. Our study was used to study of effectiveness and tolerance in all cardiac patients all the relevant and necessary data was collected from patients, care takers, case sheets, prescriptions, and physicians. **Results:** A total of 190 patients diagnosed with various cardiovascular disease were recruited in the study, conducted in out patients of cardiology department. **Conclusion:** In this study, we observed that among 190 patients males are more prone to CVD'S than females. Mostly 51-60 years of age group are mostly affected to CVD. HTN subjects have high percentage compared to other CVD 's.Tolerance is more in beta blockers followed ARB'S. Betablockers are more effectiveness than ARB'S even though it has more tolerance. According to this study we can conclude that significantly increase risk for CVD's in patients using ARB'S and betablockers. This findings was not altered by the inclusion of additional information of the ARB's and beta blockers in the analysis. However due to the low power of the study, further studies are needed to reproduce our fin.
Keywords: betablockers., cardiovascular disease, CVD, ARB'S

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C o n t e n t s

1. Introduction

Heart: The heart is a muscular organ located in the centre of chest behind sternum. Heart is divided into 4 chambers: the 2 upper receiving chambers are the atria (right and left atrium) and the two lower pumping chambers are the ventricles (right and left ventricles).
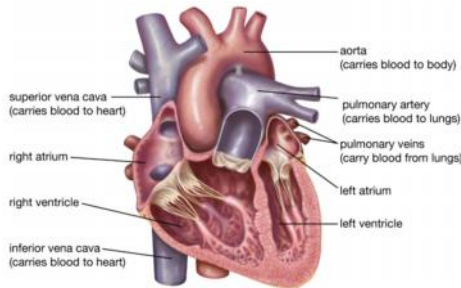
Structure and functions:

Venous blood from the systemic circulation enters the right atrium through the superior inferior venacava and this deoxygenated blood is collected in the atrium, from hare the blood flows through the tricuspid wall fills the right ventricle. Right ventricle pumps the blood across the pulmonary valve into the pulmonary artery the distributes it to the lungs for oxygenation after oxygenation the oxygenated blood from the pulmonary veins enters the left atrium and the blood passes into the left ventricle through bicuspid valve (mitral valve). Left ventricle pumps the freshly oxygenated blood to the systemic circulation through the aortic valve. This cycle is repeated again in the next heartbeat.

Cardiovascular disease:

Definition:

Cardiovascular disease (CVD) is a group of disease that include the heart and blood vessels. CVD will include coronary heart disease (CHD), Coronary artery disease (CAD), acute coronary syndrome (ACS), and several other conditions. These three terms are frequently used by health professionals interchangeably but they are different conditions which are not the same

Congenital Heart Disease:

It is the heart disease that develop before birth (congenital) congenital heart disease is broad term and include a wide range of disease and conditions, it means that the heart no longer works as it should.

Heart may starts pumping faster and get bigger.

Heart Failure:

Heart failure is a clinical syndrome caused by the inability of the heart to pump sufficient amount of blood to meet the metabolic needs of the body, or resulting from any structural or functional cardiac disorder that impairs the ability of the ventricles to fill with or eject blood.

➢ of caloric intake and saturated fat couple with increased aerobic activity has been shown to result in maintaining a healthy weight

➢ Reduction of Blood Sugar: Reducing blood sugar levels could prevent the development of diabetes for some. Increasing exercise and lowering caloric intake can help the body increase sensitivity to insulin, which terns to reduce blood sugar levels.

➢ Blood Pressure: High blood pressure has clearly been linked to increased risk for heart attacks, stroke and kidney disease.

➢ Control Cholesterol: Avoid processed meats and foods high in sugar and broil or bake food rather than fry.

➢ Physical Activity: Exercise can improve blood pressure, cholesterol and blood sugar

➢ Limit Alcohol Use : Drink less alcohol

➢ CHOOSE GOOD NUTRITION: Consume more fruits, veggies, fat-free toned diary and whole grains.

➢ AVOID STRESS: Strain on heart caused by stress increases the risk of cardiovascular diseases. So try to keep your stress low.

2. Materials and methods

- Study site:
- Cardiology and visiting op of Bhageerath cardiac care center, Hanamkonda.
- Study Desing: Retrospective observational study.
- Study period:
- This study was conducted for period of 6months (august 2022 to January 2023)
- STUDY SAMPLE SIZE: 190 Patients.

Study criteria:

Inclusion criteria:

- Males and female >18 years
- Current symptoms of cardiovascular diseases.
- Causes containing prescriptions with angiotensin II receptor antagonist and beta blockers
- Patient willing to give written information consent.

Exclusive criteria:

- Pregnant women and lactating mothers.
- Patient with prior major organ transplantation
- Patient with other heart diseases
- Patient below 18 years.
- Patient without current information consent.
- STUDY PROCEDURE: patient visiting clinic are reviewed. The patient who are meeting the study criteria are enrolled in to the study.
- The following information collected: patient demographics (Age, Gender, Weight) medical history. Medication history. social history
- Source of Data: The data was collected from a series of patient's case sheets and who were visited to Bhageerath cardiac care center in Hanamkonda

Statistical methods:

❖ Statistical analysis was performed using Microsoft office excel to determine age wise distribution, gender wise distribution, disease wise distribution, effectiveness and non-effective ness based on treatment and tolerance of drugs

❖ the distribution of effectiveness , tolerance ,age , HTN of CVD 's patients and it was assessed by paired t -test and mentioned as mean ±SEM .P-value is 0.06 was considered significant.

❖ Data collection form: A suitable designed data collected form was prepared for patients which include demographic details of patients such as age, gender, past medication history, medication history, social history, investigation chat and current medication chart.

Informed consent form:

❖ A patient inform consent form was prepared consist of description of the study the informed consent was obtained from patients who met inclusion criteria and work enrolled in the study.

3. Results and Discussion
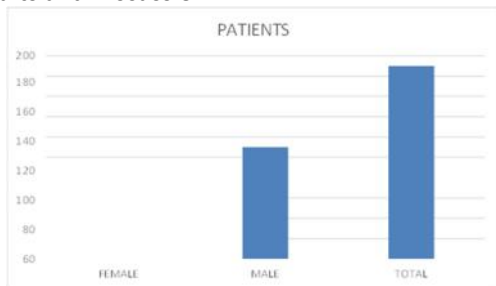
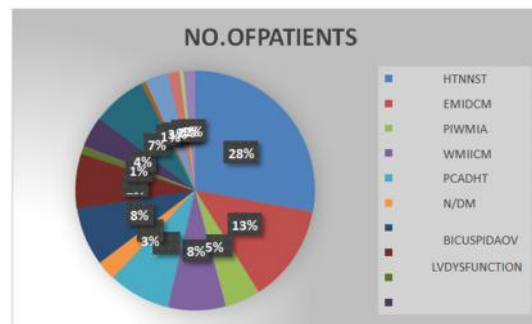Figure 1: Gender wise distribution of CVD's subjects. Among 190 patients of CVD's, males

Table.1

Years	Members
10-20YRS	3
21-30YRS	7
31-40YRS	34
40-50YRS	41
51-60 YRS	53
61-70YRS	38
71-80YRS	13
81-90YRS	1

Figure 2: Age wise distribution of CVD's subjects.

Table.2. Disease wise distribution based on various cvds

Disease	No. of patients
HTN	53
NSTEMI	25

DCMP	9
IWMI	15
AWMI	16
ICMP	5
CAD	15
HTN/DM	14
BICUSPIDAOV	2
LVDYSFUNCTION	8
MI	14
CCF	1
STEMI	6
DVD	3
ADHF	1
OTHERS	3

Figure 3: Disease wise distribution of CVD's patients.
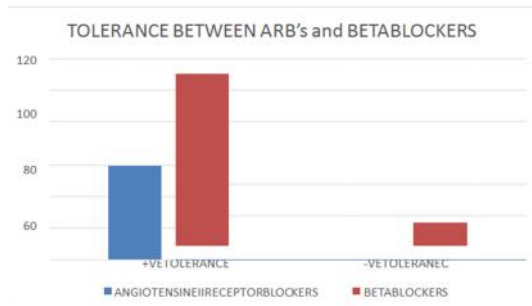
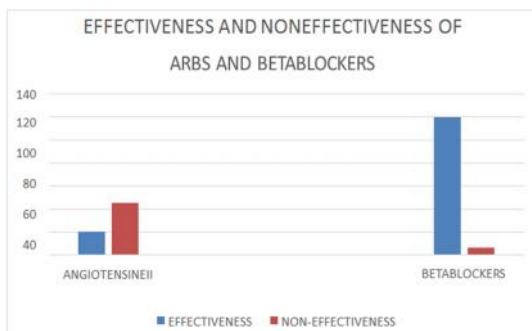Figure 4: Tolerance between ARB's and beta blockers.

Figure 5: Effectiveness and non-effectiveness of ARB's and beta blockers.

4. Conclusion

In this study, we observed that among 190 patients male saremoreprone to CVD'S than females. Mostly 51-60 years of age group are mostly affected to CVD. HTN subjects

have high percentage compared to other CVD's. Tolerance is more in beta blockers followed ARB'S. Beta blockers are more effectiveness than ARB'S even though it has more tolerance. According to this study we can conclude that significantly increase risk for CVD's in patients using ARB'S and beta blockers. These findings was not altered by the inclusion of additional information of the ARB's and beta blockers in the analysis .However due to the low power of the study , further studies are needed to reproduce our findings.

5. References

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