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The prescription pattern for coronary artery disease in tertiary care hospitals

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Article History:	Abstract
Received on: 26 Oct 2023 Revised on: 01 Nov 2023 Accepted on: 02 Nov 2023	The study aims to assess the current prescribing patterns for drugs managing Coronary Heart Disease (CHD) at the designated site to promote rational drug use in a specialized population. Conducted in the Medicine ward over six months, this observational retrospective study focused on patients consulting cardiologists for cardiac issues. Among lipid-lowering agents, rosuvastatin was the most prescribed (52.84%), followed by atorvastatin (43.15%). Anti-hypertensive agents were widely used, with beta-blockers, ACE inhibitors, and diuretics being popular choices. Adrenergic receptor blockers were common for hypertension, with metoprolol (55.7%) and bisoprolol (10.8%) frequently prescribed. ACE inhibitors, particularly Enalapril (65.6%), dominated prescriptions. Diuretics, including eplerenone (37.2%) and furosemide (33.3%), ranked third. The majority of patients were male, potentially linked to smoking and alcohol habits. Analysis revealed the prevalence of statins and anti-atherogenic agents in cardiovascular prescriptions. Beta-blockers, ACE inhibitors, and diuretics were prominent in managing hypertension.
Keywords: Coronary heart disease, Prescribing pattern, Drug Utilization	



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INTRODUCTION

The condition known as coronary artery disease occurs when atheroma, thrombosis, or spasm of the coronary arteries obstructs the circulatory supply to the heart. In addition to being the world's top cause of death and disability, cardiovascular diseases (CVDs) are the most common non-communicable diseases. More people pass away each year from CVDs than any other reason.

Atherosclerosis, or plaque in the arterial walls, is primarily responsible for coronary artery disease (CAD), affecting the inner lining of the blood

vessels that carry blood toward the heart. When hard cholesterol deposits, such as plaques, form inside a coronary artery, coronary artery disease (CAD) occurs. The plaques cause the arteries' internal diameter to narrow, which may lead to the formation of a small clot that obstructs the blood supply to the heart muscle [1]. This lowers the oxygen and nutrition reaching the cardiac muscles, vital for the heart's healthy operation. Modifiable risk variables include [2][3]

1. **Hypertension:** Can be successfully treated if detected, and the suggested management strategy is followed.
2. **Cholesterol:** Elevated triglyceride levels, high levels of low-density lipoprotein (LDL) cholesterol, or low levels of high-density lipoprotein (HDL) cholesterol all increase the risk of heart disease and stroke.
3. **Diabetes:** More common in developing cardiovascular disease at a younger age than others; uncontrolled diabetes has more severe consequences.
4. **Tobacco:** A risk factor for cardiovascular disease; tobacco avoidance may reduce the risk of CVD.
5. **Diet:** Low intake of fruits, vegetables, and seafood, along with a high intake of salt, saturated fat, and trans fats, has been linked to an increased risk of cardiovascular disease. Trans-fat consumption negatively impacts blood lipids and circulating inflammatory markers. High consumption of processed meats has been associated with an increased risk of cardiovascular disease, possibly due to increased dietary salt consumption [1].
6. **Alcohol consumption:** Moderate drinking without excessive intake may be associated with a lower risk of cardiovascular disease.
7. **Physical inactivity:** The fourth leading cause of death worldwide [1]. In 2008, around 31.3% of adults aged 15 and up (28.2% males and 34.4% women) were insufficiently physically active.

Medicines such as contraceptive pills and hormone replacement treatment can also increase

the risk of heart disease. Some non-modifiable risk variables are as follows [4]:

1. **Genetics:** Cardiovascular disease in a person's parents triples their risk.
2. **Age:** It is estimated that 82% of Americans who die from coronary heart disease are 65 or older. Meanwhile, the risk of stroke doubles every decade after the age of 55. In women, the rise continues until the age of 60 to 65.
3. **Sex:** Premenopausal women are less likely to get heart disease than males are. Recent data from the WHO and United Nations refute the notion that a woman's risk is comparable to a man's when she reaches menopause. Men in their middle years are two to five times more likely than women to have coronary heart disease.
4. **Ethnicity:** Those of Asian or African descent are more likely to develop cardiovascular disease compared to other racial groupings.

TREATMENT

Caretakers and heart disease patients alike must comprehend the recommended drug, adhere to usage guidelines, and be aware of any potential negative effects linked to the prescription. Among the most often recommended medications for heart disease are:

1. **Angiotensin Converting Enzyme (ACE):** The hormone angiotensin causes blood arteries to constrict or shrink. Some examples of frequently prescribed medications are:
 - Benazepril.
 - Caprisol.
 - Enalapril.
 - Lisinopril and fosinopril.
 - Moexipril.
 - Lidocaine.
 - Quinolactin.
 - Rimacrim.
 - Tetracycline [5].
2. **Angiotensin II Receptor Blockers (ARB):** ARBs totally prevent the cardiac effects of Angiotensin II, in contrast to Angiotensin Converting Enzyme Inhibitors. The

following medications are examples of those often prescribed: Telmisartan, Valsartan, Irbesartan, Eprosartan, as well as Caddesartan.

3. **Anticoagulants (Blood Thinners):** These medications can prevent blood clots from forming but cannot dissolve already-formed clots. Heparin, Warfarin, Apixaban, Dabigatran, as well as Rivaroxaban are a few examples of commonly prescribed medications.
4. **Antiplatelets:** Following a cardiac event, such as a heart attack, they are prescribed. Some examples of commonly prescribed medications are aspirin, clopidogrel, dipyridamole, prasugrel, as well as ticagrelor [6].
5. **Beta-blockers:** By preventing the effects of adrenaline (epinephrine), they improve heart function and lessen the body's generation of toxic compounds as a reaction to heart failure. Several often recommended medications are as follows:
 - Acebutolol.
 - Atenolol.
 - Bisprolol.
 - BetazololMetoprolol.
 - Bisoprolol/hydrochlorothiazide.
 - Nadolol.
 - Propranolol.
 - Sotalol.
6. **Calcium Channel Blockers (CCB):** Depending on a person's particular health condition or circumstances, calcium channel blockers can act on various body parts to fulfill particular purposes. Some examples of often prescribed medications are:
 - Diltiazem.
 - Felodipine.
 - Nimodipine.
 - Nisoldipine.
 - Verapamil.
 - Amlodipine.
7. **Anti-hyperlipidemics:** Plaque accumulation brought on by cholesterol deposited in blood vessels can restrict

blood vessels. If a blood clot develops around the ruptured plaque, the plaque may break off and obstruct the blood vessel. Some examples of drugs that decrease cholesterol are as follows: Atorvastatin, Simvastatin, and Pravastatin Sodium are statins [7].

8. **Vasodilators:** By relaxing blood arteries and allowing blood to circulate freely throughout the body, vasodilators are recommended to treat heart failure and control high blood pressure. Some examples of commonly administered medications are:
 - Nesiritide.
 - Isosorbidedinitrate.
 - Hydralazine.
 - Nitrates.
 - Minoxidil.
9. **Diuretics:** Also referred to as "water pills," diuretics are used to treat high blood pressure as well as the swelling and water accumulation brought on by a number of illnesses, including heart failure. Amiloride, Bumetanide, Chlorothiazide, Chlorthalidone, Furosemide, Hydrochlorothiazide, Indopamide, as well as Spironolactone are a few examples of often prescribed medications.
10. **Potassium Channel Activators [8]:** One kind of medication that helps ions pass through potassium channels is called a potassium channel opener. Among them are:
 - Diazoxide, a vasodilator used to treat hypertension and also relax smooth muscles.
 - Minoxidil is a vasodilator used to treat hair loss as well as hypertension.
 - The vasodilator nicorandil is used to treat angina.

Coronary Computed Tomography Angiography (CCTA) [9][10]

This has developed as an effective noninvasive diagnostic technique for assessing coronary arteries in patients at low to moderate risk of

obstructive coronary artery disease. With technological developments, the therapeutic applications of CCTA have greatly expanded, and several radiological associations have established recommendations, appropriateness criteria, and expert agreement on CCTA [1-5]. A number of clinical trials (CT-STAT, ACRIN-PA, ROMICAT II, and CT-COMPARE) have shown that CCTA outperforms traditional evaluation procedures in both acute and stable chest pain [5-9]. Prior to the introduction of the Society of Cardiovascular Computed Tomography (SCCT) standards for the interpretation and reporting of CCTA, the primary goal of CCTA was to rule out coronary atherosclerotic disease (CAD) and, if present, to classify luminal stenosis. However, the absence of standardization has resulted in significant variation in reporting among practitioners. Other fields in medical imaging have already implemented standardized reporting formats, such as Breast Imaging Reporting and Data System, Liver Imaging Reporting and Data System, Prostate Imaging Reporting and Data System, Lung Imaging Reporting and Data System, which have enabled clinicians to interpret the clinical relevance of structured and standardized reported findings and take appropriate action.

CAD REPORTING SYSTEM

For the most severe cases of coronary artery stenosis, CAD is used on a case-by-case basis, specifically for vessels with a diameter higher than 1.5 mm. SCCT guidelines determine scan indications, imaging protocol, training requirements, and scan interpretation. The final CAD category is determined by the severity of coronary artery stenosis, plaque morphology, stent evaluation, and coronary artery bypass graft (CABG) study [11]. It should be noted that CAD classification does not replace the report but is merely a supplement to the report's conclusion section. The descriptive report should include a detailed study of each coronary segment [12].

CAD CATEGORIES

There are six different types of CAD, ranging from CAD 0 (no plaque) to CAD 5 (at least one entire occlusion). The category is determined by the degree of stenosis present. CAD 0 indicates that there is no atherosclerotic disease in any coronary artery **Figure 1** [13]. A single maximal stenosis of 1%-24% is defined as CAD-1 **Figure 2**, 25%-49%

as CAD-2 **Figure 3**, 50%-69% as CAD-3 **Figure 4**, and 70%-99% as CAD-4 **Figure 5** [14]. CAD-4 is classified into two subcategories: 4A, which corresponds to a single or two-vessel 70%-99% stenosis, and 4B, which relates to three-vessel 70%-99% stenosis or a single 50%-99% stenosis in the left main artery **Figure 6**. CAD-5 denotes total blockage of at least one artery, which might be acute or chronic **Figure 7** [15]. Calcification and collateralization are signs of chronic etiology. Differentiating acute from chronic occlusive plaque has therapeutic implications in terms of treatment planning. CAD-N **Figure 8** is a subcategory allocated when some segments of the coronary arteries are non-interpretable, and also the interpretable segments have stenosis [16].

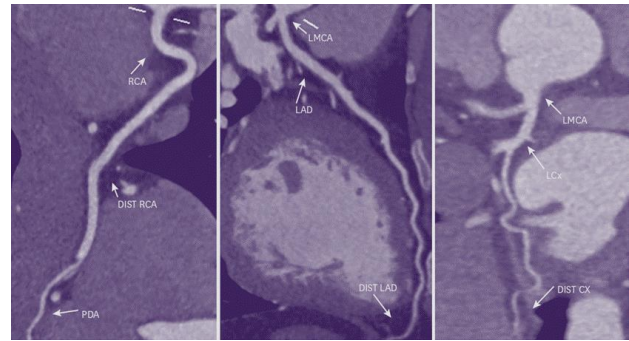


Figure 1 A 45-year-old man with a history of chronic chest pain was diagnosed with Coronary Artery Disease Reporting as well as Data System 0

CX: circumflex artery, DIST: distal, LAD: left anterior descending, LCx: left circumflex, LMCA: left main coronary artery, PDA: posterior descending artery, RCA: right coronary artery.

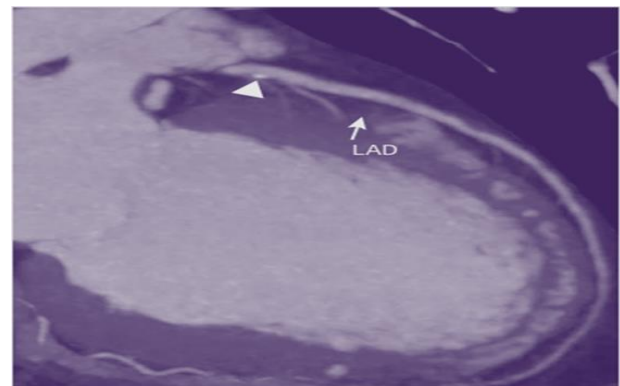


Figure 2 A 38-year-old man with unusual chest discomfort was diagnosed with Coronary Artery Disease Reporting as well as Data System 1

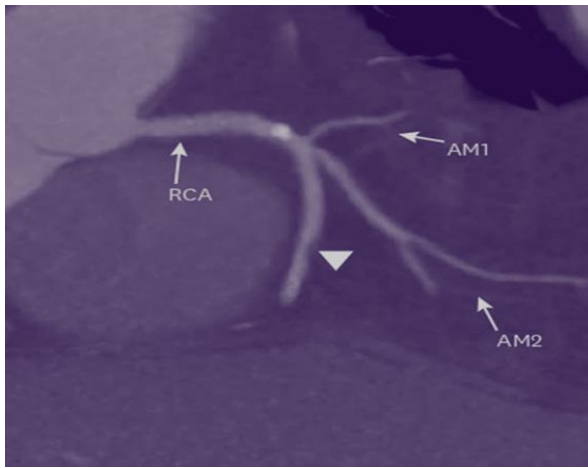


Figure 3 A 56-year-old man with chronic chest pain was diagnosed using Coronary Artery Disease Reporting as well as Data System 2

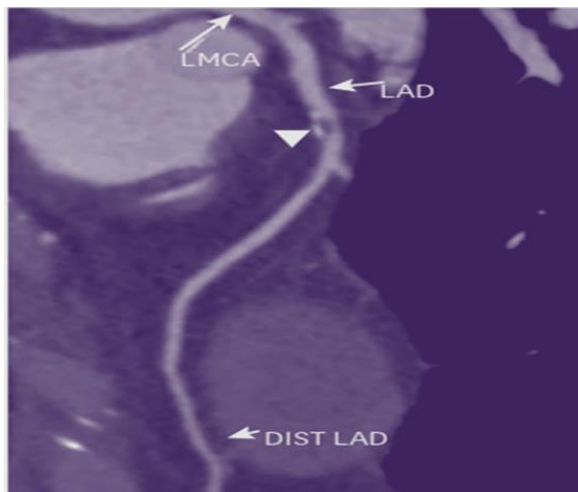


Figure 4 A 72-year-old woman with unusual chest discomfort was diagnosed with Coronary Artery Disease Reporting as well as Data System 3

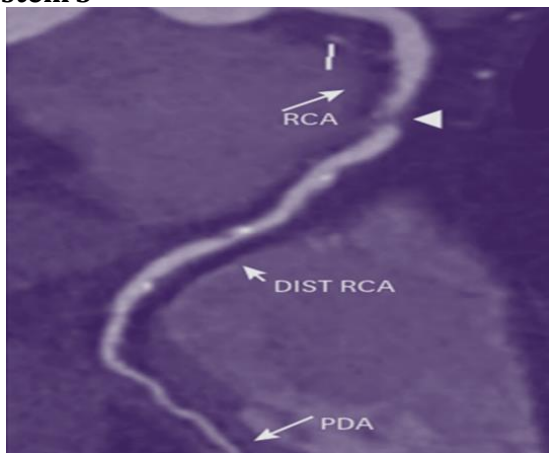


Figure 5 A 56-year-old woman was diagnosed with Coronary Artery Disease Reporting as well as Data System 4A

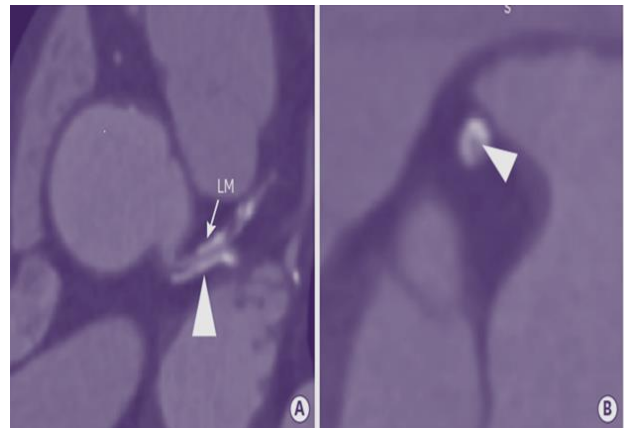


Figure 6 A 65-year-old man was diagnosed with Coronary Artery Disease Reporting as well as Data System 4B

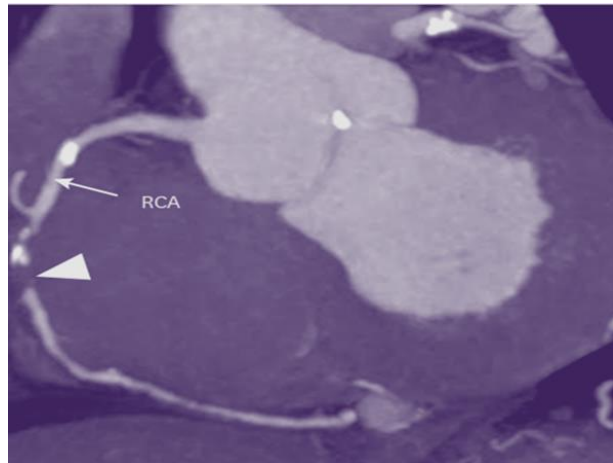


Figure 7 A 59-year-old man was diagnosed with Coronary Artery Disease Reporting as well as Data System 5

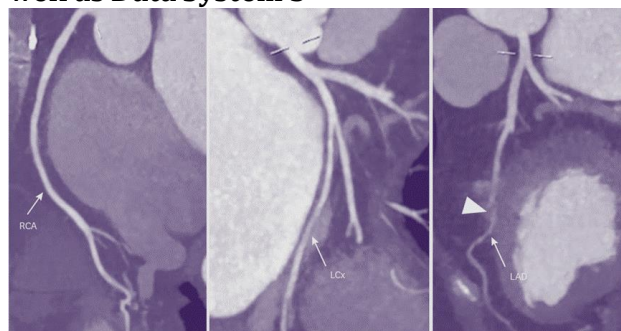


Figure 8 A 40-year-old lady was diagnosed with Coronary Artery Disease Reporting as well as Data System N

DRUG PRESCRIPTION PATTERN

Prescription patterns serve as an indicator of a health professional's ability to navigate through numerous medication options and identify the ones that will work best for their patients. Since

prescription writing conveys the doctor's message to the patient, it is both an art and a science. It is an order for a member to receive a scientific drug at a specific time [17]. As a component of medical review, the study of prescribing patterns aims to monitor, assess, and, if required, suggest changes to prescribing practices to improve the logic and economy of medical care. Appropriate drug utilization studies are crucial tools for examining whether pharmaceuticals are used appropriately in terms of sufficiency, security, affordability, and convenience at every step of the medication use process [18].

DRUG UTILIZATION

Several issues, including the national drug policy, illiteracy, poverty, the use of multiple healthcare systems, drug marketing and promotion, the sale of prescription drugs without a prescription, competition in the pharmaceutical and medical industries, and the scarcity of independent, unbiased drug information, are challenges faced by India [19]. Adverse drug use can also increase the risk of adverse effects, patient death, antimicrobial resistance, and medical issues. Consequently, recent research on drug use has evolved into a potentially valuable means that can be applied to health system evaluations. The significance has increased due to the promotion of new medications, significant changes in prescription and usage patterns, growing concern over delayed side effects, and increasing worry over drug costs [20].

Types of Drug Utilization Studies

Investigations on drug use can be either quantitative or qualitative in nature. The process of gathering, organizing, analyzing, and reporting data about actual drug usage is multidisciplinary and is known as qualitative drug utilization studies. Quantitative drug utilization research involves the gathering, organizing, and presentation of estimates or measurements of drug usage [21].

Sources of Data on Drug Utilization

1. Big Database
2. Information from Drug-Controlling Authorities
3. Data on Suppliers (Distribution)

4. Data Prescription and Dispensing
5. Drug Use Evaluation

These sources contribute to a comprehensive understanding of drug utilization patterns and help in making informed decisions about the efficiency, safety, and accessibility of medications in the healthcare system.

METHODOLOGY

Study Design: This is a retrospective and prospective observational study conducted over a period of 6 months in the inpatient department of cardiology at KIMS Hospital Nellore, a tertiary care hospital.

Collection of Data: Relevant information about each inpatient with coronary artery disease was gathered using appropriately constructed forms to examine prescribing patterns. Patient age, gender, treating cardiologist's diagnosis, comorbid illnesses, and risk factors for coronary artery disease were extracted from inpatient case files. Medication details included the type, dosage form, dose, administration route, and frequency [22]. Laboratory indicators, such as blood pressure, blood glucose levels, lipid profile, serum creatinine levels, serum electrolytes, prothrombin time, and international normalized ratio (INR), tracked during treatment, were also documented. Additional information not available in case files was obtained through interviews with patients, their caregivers, or medical professionals.

Inclusion Criteria: The study included all inpatients in the cardiology unit diagnosed with coronary artery disease by a consultant cardiologist.

Exclusion Criteria [23][24][25]

1. Patients managed in a day care facility.
2. Pregnant and lactating women.
3. Patients diagnosed with additional heart disorders.
4. All outpatients in OPDs.
5. Mentally ill patients.
6. Pediatrics.

Duration of the Study: The study was conducted over 6 months (May 2023 to October 2023).

RESULTS

1. The prevalence of coronary artery disease in the given population was depicted in **Figure 9**.
2. Gender-wise distribution of CAD patients was tabulated in **Table 1**.
3. Column chart on age-wise distribution among CAD patients was represented in **Figure 10**.
4. Surgical procedures observed in the study population were tabulated in **Table 2**.
5. Cross-tabulation on medical condition and the number of patients was tabulated in **Table 3**.
6. Bar chart on the prescribing patterns of physicians was represented in **Figure 14**.
7. Cross-tabulation of prescribed drugs and the number of drugs given was tabulated in **Table 4**.

The study results provide a comprehensive overview of the prevalence, demographic distribution, surgical interventions, medical conditions, and prescribing patterns among inpatients diagnosed with coronary artery disease in the specified period.

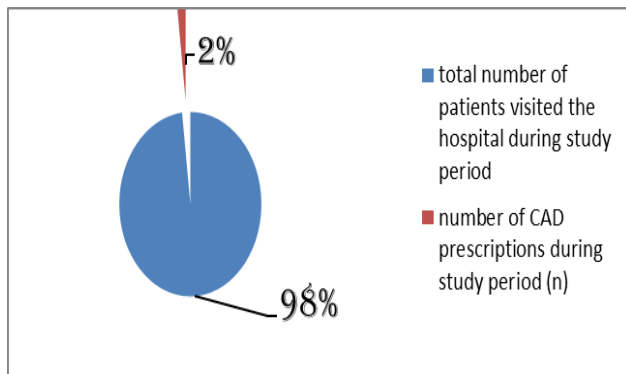


Figure 9 Prevalence of coronary artery disease in the given population

Table 1 Gender wise distribution of CAD patients

S. No.	Sex	Number of patients (n=100)	Percentage (%)
1.	Male	55	55%
2.	Female	45	45%

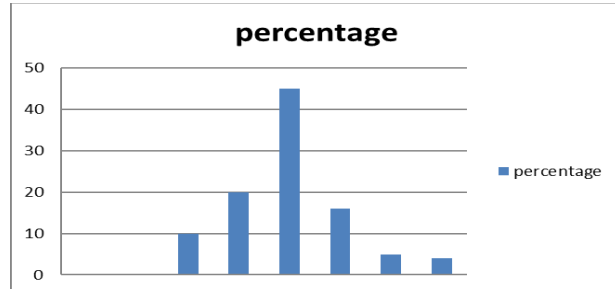


Figure 10 Column chart on age wise distribution among cad patients

Table 2 Surgical procedures observed in the study population

Sl.no.	Name of the surgical procedure	Number of patients (n=124)	Percentage (%)
1.	Coronary angiogram	88	69.3%
2.	Percutaneous transluminal coronary Angioplasty.	33	29.03%
3.	Coronary artery bypass grafting	03	1.61%

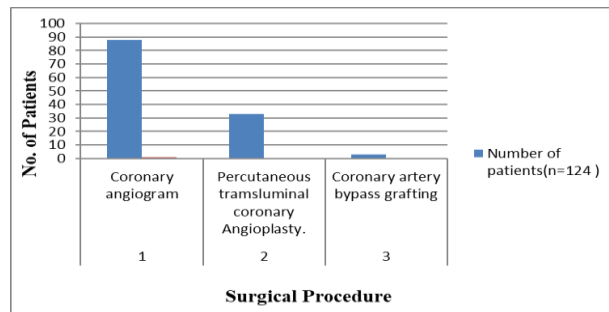


Figure 11 Bar graph on Surgical procedures observed in the study population

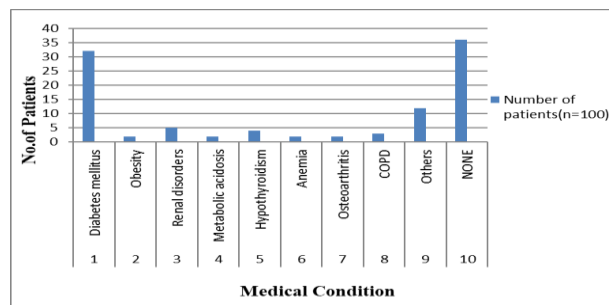


Figure 12 Colum Chart on Cross tabulation on medical condition and no. of patients

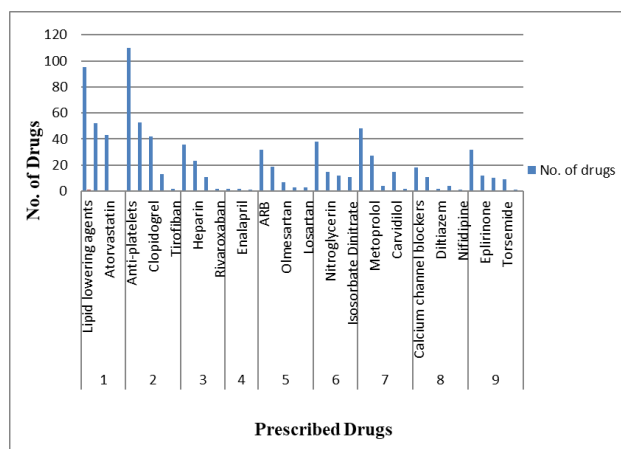


Figure 13 Bar graph on prescribed drugs and no. of drugs given

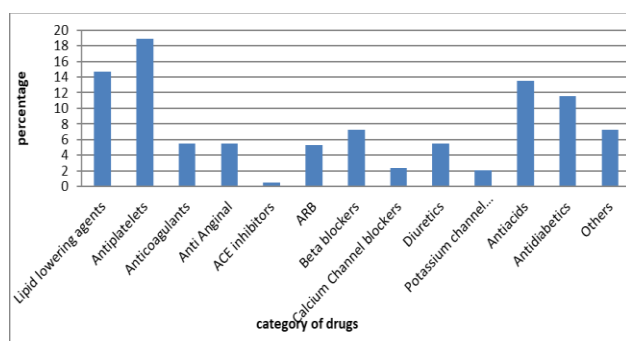


Figure 14 Bar chart on the percentage and category of drugs

Table 3 Cross tabulation on medical condition and no. of patients

S.no.	Medical condition	Number of patients (n=100)	Percentage (%)
1	Diabetes mellitus	32	32%
2	Obesity	2	2%
3	Renal disorders	5	5%
4	Metabolic acidosis	2	2%
5	Hypothyroidism	4	4%
6	Anemia	2	2%
7	Osteoarthritis	2	2%
8	COPD	3	3%
9	Others	12	12%
10	NONE	36	36%

DISCUSSION

Patients meeting any of the aforementioned characteristics but diagnosed with coronary artery disease are selected for the study. The study

primarily examines patient data, including age, sex, past and present medical histories, and classes of therapies received. The patient profiles in their medical records provide the data.

Table 4 Cross tabulation prescribed drugs and no. of drugs given

S.No	Prescribed drugs	No. of drugs	Percentage (%)
1.	Lipid lowering agents	95	52.85%
	Rosuvastatin	52	43.14%
	Atorvastatin	43	
2.	Anti-platelets	110	
	Aspirin	53	53.8%
	Clopidogrel	42	42.6%
	Ticagrelor	13	13.9%
	Tirofiban	2	2.56%
3.	Anticoagulants	36	
	Heparin	23	63.7%
	Enoxaparin	11	28.4%
	Rivaroxaban	2	2.9%
4.	ACE Inhibitors	2	
	Enalapril	2	65.6%
	Lisinopril	1	34.3%
5.	ARB	32	
	Telmisartan	19	59.6%
	Olmesartan	7	22.21%
	Valsartan	3	8.09%
	Losartan	3	10.09%
6.	Anti-Anginal	38	
	Drugs	15	49%
	Nitroglycerin	12	39.2%
	Trimetazidine	11	41.1%
	Isosorbate Dinitrate		
7.	Beta Blockers	48	
	Metoprolol	27	55.7%
	Bisoprolol	4	10.8%
	Carvedilol	15	30.1%
	Nebivolol	2	3.2%
8.	Calcium channel blockers	18	
	blockers	11	61%
	Amlodipine	2	12.3%
	Diltiazem	4	19%
	Cilnidipine	1	7.6%
	Nifedipine		
9.	Diuretics	32	
	Eplirinone	12	37.2%
	Furosemide	10	33.3%
	Torseamide	9	25.4%
	Metolazone	1	3.9%

Approximately 5,275 patients visited the hospital during the study period. The prevalence of coronary artery disease was determined to be 9.478% based on the 500 patients diagnosed with the condition.

The inclusion and exclusion criteria in this study resulted in the selection of 100 patients in total. Of the 100 patients chosen, 55 (or 55%) were men, and the remaining 45 (or 45%) were women. The patients were split into the following age groups: 18–20 years, 21–30 years, 31–40 years (10%), 41–50 years, 51–60 years, 61–70 years (16%), 71–80 years (5%), and 81–90 years (4%). Due to their everyday activities, smoking, and alcohol consumption, more male patients than female patients were included in this study. Prescription patterns, as well as the prevalence of CVD, revealed that more men than women were among the patients.

Although coronary artery disease can affect any age, getting older raises the risk of developing CAD. The majority of patients in this study are between the ages of 51 and 60, then 61 and 70. This aligns with the earlier drug usage assessment report on CAD, which found that 40–60 years old was the typical age range for CAD cases.

The doctors' extensive diagnosis of the patients revealed a variety of clinical problems. Undoubtedly, 38% of patients had diabetes recorded, whereas 1% had metabolic acidosis as their diagnosis. It was reported that obesity affected about 1% of CVD patients. 10% of patients were diagnosed with other diseases, 3% of patients had hyperthyroidism, 3% had renal problems, 1% had anemia, and 1% had other conditions.

Diabetes raises the risk of coronary heart disease, affecting around half of the population. According to a study, hypertension ranks second in terms of cardiovascular disease, the main contributor to conditions including angina pectoris, heart failure, stroke, and myocardial infarction. According to other population-based research, high insulin, frequently present in people with type II diabetes mellitus, is both a separate risk factor and a co-occurring condition with cardiovascular disease. Anomalies relating to platelet function, clotting factors, and lipid metabolism are additional cardiovascular risk factors in diabetics.

The patients' various medical issues were also diagnosed by the doctors. For instance, diabetes affected 38% of CAD patients. Roughly 3% of patients experienced renal problems, while 3% experienced thyroid issues. Among the several additional related medical disorders were COPD (2%), 1%, and many others.

Elderly persons have a higher risk of developing coronary artery disease than younger patients do. This includes related conditions such as diabetes mellitus, thyroid, kidney, and anemia problems, as well as GI, asthma, COPD, and anemia. Diabetes mellitus was the most common related disease reported in this investigation. According to data on CAD prevalence and medication use trends, co-morbid conditions like diabetes, anemia, and asthma were linked to CAD.

Doctors provided medications from a variety of pharmacological treatment classes. These medications prescribed to patients in various groups have been grouped. Anti-platelets (18.84%), lipid-lowering medications (14.65%), anti-anginal medications (5.47%), and anticoagulants (5.47%) were recommended for the majority of patients. The patients were prescribed a variety of anti-hypertensive medications, including diuretics (5.47%), beta-adrenoceptor blockers (7.24%), ACE inhibitors (0.48%), angiotensin receptor blockers (5.31%), and also calcium channel blockers (2.41%). Patients with or without ulcers were prescribed 13.52% anti-ulcer medications by the doctors. Of the drugs used to decrease cholesterol, the majority of patients received rosuvastatin (52.85%) as well as atorvastatin (43.14%).

Patients were administered aspirin (53.8%) along with clopidogrel (42.6%) to reduce clotting and achieve the combined anti-platelet effect of both medications. Merely 63.7% and 2.9% of patients received prescriptions for heparin and rivaroxaban, respectively.

Vasodilators as well as other anti-angina drugs were widely utilized. In half of the patients, nitroglycerin was prescribed, whereas 41.1% of patients received an isosorbide dinitrate prescription.

The majority of the patients utilize anti-hypertensive medications. ACE inhibitors, diuretics, and beta-blockers were the most

avored alternatives. Patients with hypertension are prescribed drugs called adrenergic receptor blockers. The majority of doctors prescribed bisoprolol (10.8%) and metoprolol (55.7%). Conversely, 31.1% of doctors also prescribed carvedilol. ACE inhibitors stood a good chance of being prescribed. The majority of patients (65.6%) received enalapril. The doctors' third-choice medication was a diuretic, with furosemide (33.3%) and eplerenone (37.2%). The medications that the majority of the specialty physicians—cardiologists and cardiac specialists—prescribed will benefit general practitioners. According to the study, the majority of patients with abnormalities of their lipid profiles ought to use cholesterol-lowering medications. Doctors recommended atorvastatin, the most widely prescribed and sold medication, as a workaround. When HDL levels are raised, blood LDL cholesterol levels are effectively lowered. Along with fewer adverse effects, it also successfully lowers the risk of coronary artery disease, myocardial infarction, and stroke.

Anti-atherogenic medications were given to the coronary artery disease patients to stop clotting at the coronary arteries, which could eventually be fatal to them. Sudden myocardial infarction or stroke may result from this kind of blood vessel constriction.

The doctor suggested aspirin as well as clopidogrel to avoid this. The treatment of choice for both stable and unstable angina was nitroglycerin. In a matter of minutes, it widens the blood arteries and gives the heart more oxygen. The second option for this was nitrates.

A class of cardiovascular medications used to treat hypertension binds to beta-adrenergic receptors. The antihypertensive and cardioprotective properties of this family of medications support far greater use, as this study found. When used for chronic heart failure and myocardial infarction prophylaxis, beta-blockers lower the death rate. The two most often administered medications in this study were atenolol and carvedilol. ACE inhibitors and diuretics come next. The expansion of their indications for the treatment of heart failure, diabetic nephropathy, hypertension, etc., may account for this. With its potential to protect against heart attacks and stroke, ACE inhibitors have emerged as one of the most significant

pharmaceuticals in the field of cardiology over the past ten years. ACE inhibitors have been shown in numerous clinical trials to reduce morbidity and death in individuals with congestive heart failure and acute myocardial infarction.

The cornerstone of antihypertensive therapy is thiazide diuretics, although when taken alone, loop diuretics or high-ceiling diuretics can be very effective antihypertensive medications. Furosemide and spironolactone were taken together to address the adverse effects of the former, namely severe hypertension. In elderly patients with stage I or II hypertension, or in conjunction with severe hypertension, this combination of medications is advised as initial monotherapy.

CONCLUSION

The study determined that coronary artery disease affected the majority of the individuals who were part of it. Food choices, smoking, inactivity, as well as poor cleanliness may be the cause of these. Treatment was successful because the patient's return to a normal life was a result of the logical prescription pattern and adherence to accepted treatment protocols.

The majority of patients were men. According to research, statins and anti-atherogenic medicines are the most effective cardiovascular treatments when compared to others. The antihypertensive group is dominated by beta-blockers, ACE inhibitors, and diuretics. The study has some limitations, leading to the conclusion that it cannot be considered standard because it was conducted at a single tertiary level hospital, which may not correspond with data from other generalized hospitals.

The prescribing of calcium channel blockers and also angiotensin receptor blockers should be modified by implementing educational interventions.

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Conflict of Interest

The authors declare no conflict of interest, financial or otherwise.

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