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PREVALENCE OF DIFFERENT CARDIOVASCULAR DISEASES IN CARDIOLOGY DEPARTMENT OF A TERTIARY CARE HOSPITAL AND UTILIZATION OF ANTIPLATELET DRUGS ANTICOAGULANTS AND PERCUTANEOUS CORONARY INTERVETION IN CORONARYARTERY DISEASE & ACUTE CORONARY SYNDROME PATIENTS

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INTRODUCTION

- Coronary artery disease (CAD), which also include hypertension, stroke and valvular, muscular and congenital cardiacillness, is one of the diseases of cardiovascular disease (CVDs). In 1996, 29% of world deaths were due to CVD, which makes it the world's leading cause of death. Nearly half of those deaths are estimated by CAD.
- A wide range of diseases ranging from chronically stable angina to sudden myocardial infarction has long been recognised for coronary artery disease. Unstable angina, a diverse disease with widespread symptoms and prognostics isin the middle of this continuum.
- Angina contributes for around 1 million admissions to hospital every year 6 to8% of people suffering from this syndromehave or die within the first year following diagnosis of a nonfatal myocardial infarction.
- Identification and preventive efforts in industrialised countries have resulted in the identity of risk factors for CAD, i.e. diabetes, genetics, hypercholesterolemia and hypertensions.
- On the other hand, exposure to these risk factors in developing countries appears to be growing via "globalising" dietary patterns (PCR) in diabetic patients. The disease of the coronary artery is quite prevalent and costly. 1 Percutaneous coronary procedure (PCI, including balloon angioplasty) is used in addition to medical therapy in the treatment of symptomatic coronary artery disease, in addition to stent implantation and adjunctive technique such as thrombectomyand atherectomy.
- PCI is a choice treatment for the two major coronary artery disease sub-sets of high risk ACS, including ST myocardial elevation infarction (STEMI), NST myocardial elevation (NSTEMI), unstable angina(UA), and optimised guideline- orientated medical treatment for stable, symptomatic ischemic heart disease. PCI is also a treatment for the following major coronary artery disease.

PREVALENCE OF CARDIOVASCULAR DISEASES IN INDIA

The primary cause of morbidity and mortality in India has been cardiovascular disease (CVD). Recent trends show that the illness has also been increased among groups of younger age. In both urban and rural populations, it has a significant presence in men and women.

There has been a rising prevalence of its associated risk factors in the population. A number of epidemiological studies have been conducted in India with such rapid speed of growing incidence to trace the prevalence of CVD through time. Some of them have predicted CVD in India for its future impact and prevalence. Original articles in several national and international journals have been searched via the Web to produce this review paper. It covered just those research that were carried out after 2000. Key terms including 'prevalence,' 'coronary cardiovascular disease' and 'heart disease' have been utilised to locate items such as 'India,' 'risk factors.' This article attempts, via around 10 to 15 studies meeting the standards of reference, to incorporate data acquired up to now. This paper seeks to give an overview during the last decade of the prevalence of CVD, as observed and estimated in several studies on the Indian population.

ACUTE CORONARY SYNDROME

The number-one killer of Americans remains a disease of the Coronary Artery, where an atherosclerotic place grows in the coronary arteries and limits blood flow (and consequently the supply of oxygen) to the heart. Every 25 seconds, one woman or man encounters an incident of the coronary artery, despite the time and resources spent teaching health care professionals and the public about their risk factors, symptoms and treatment. Coronary artery disease may lead to acute coronary syndrome (ACS), which characterises any evidence of abrupt myocardial ischemia – a sudden decrease in heart flow. The name ACS was adopted because the evolution of a myocardialishemia condition was seen to reflect more clearly. The two are ACS-sensitive angina and myocardial infarction (MI).

ACS symptoms and signs

ACS is a continuum of severity signs and symptoms ranging between instability angina and non-ST segment elevation MI (NSTEMI) to ST segment elevation MI (STEMI). Unstable angina and NSTEMI usually come from a coronary artery which is overshot partially or intermittently whereas a coronary artery is completely overshot.

IRRATIONAL PRESCRIPTION AND NEED OF DUR IN CAD PATIENTS

In clinical practise irrational prescription of medicines is prevalent and leads to poor and unsecure treatment, an extension of disease, distress and unnecessary financial load on the patient. Studies of prescribing patterns and the usage of pharmaceuticals are beneficial in identifying the problems and offer prescribers with feedback so that they become aware of the sensible use of pharmaceuticals. The study therefore tried to assess the present prescription patterns of medicines used for the treatment of patients with CAD-ACS to provide adequate usage of the pharmaceuticals in order to reduce morbidity and disease mortality and the patient's unnecessary cost.

REVIEW OF LITERATURE

Shraddha Chauhan et al, An overall study revealing increasing elevated prevalence of cardiovascular diseased disease in India has been revised in 2013 and recent trends in younger age groups have shown an incidence. The need of the hour is to monitor the disease prevalence closely and maintain the correct and detailed database in hospitals, communities and elsewhere. The effect of corrective action and health policy is also to be assessed easily. [Shraddha Chauhan, Dr. Bani Tamber Aeri, 2013]

Avula Naveenet al, in 2017 conducted A retrospective, non-interventional and observational study in this study they have analyzed total of 68 case records of the patients diagnosed with Acute Coronary Syndrome (ACS) out of that 47 (69.11%) belongs to male patients and 21 (30.88%) were of female patients. The mean age of patient was 57 years; most of the patients belonging to age group of 51-60 years (36.76%). Number of patients undergoing thrombolysis were 30 (44.11%) and 38 (55.88%) underwent percutaneous coronary intervention (PCI). Total 526 drugs were prescribed in 68 patients. Most frequently prescribed drugs were antiplatelet drugs like Clopidogrel and Aspirin, also Statins like Atorvastatin in 100% encounters. Their study provides valuable insight about the overall pattern of drugs used in Acute Coronary syndrome. [Avula Naveen, Dr. MR Sravani and J Naresh Venkat, 2017]

AIMS AND OBJECTIVES

AIM: To study prevalence rate of different Cardiovascular diseases in cardiology department of a tertiary care hospital And to evaluate the utilization of antiplatelet drugs, Anticoagulants and Percutaneous Coronary Intervention in , Coronary Artery Disease and Acute Coronary Syndrome.

OBJECTIVE

1. The objective is to study:
2. The prevalence rate of different Cardiovascular diseases in cardiology department of a tertiary care hospital.
3. To determine severity of Myocardial Infraction in CAD-ACS patients based on Cardiovascular bio-markers.
4. The use of anti-platelets, anticoagulants and percutaneous coronary intervention in Coronary Artery and Acute Coronary Syndrome should be observed.

MATERIALS AND METHODS

Study site: This Research was conducted in Aster Prime Hospital.
Study design: A retrospective observational study.
Study period: This research was carried out for a period of 6 months.
Sample size: Our study was carried out in cardiology department of a tertiary care hospital on 118 patients.

Study criteria Inclusion criteria-

1. Individual above the age of 18 years
2. Patients diagnosed with CAD, ACS, Angina and MI.
3. Patients who underwent PCI.
4. Patients undergoing post-PCI Antiplatelet therapy and Anticoagulant therapy.
5. Patients with comorbidities.

Exclusion criteria

1. Patients who are pregnant.
2. Lactating women.
3. Pediatric population

Sources of data: In Aster Prime Hospital our Research was initiated. Collection of inpatient and outpatient form were donebased upon inclusion and exclusion criteria of our Research. The designing of patient profile was done which incorporated all the required parameters of our Research and the patient information was collected. Duration of data collection was for 6 months.

Data collection: Analysis of data was done with the help of statistician using SPSS software, chi square test and ANOVA. The standard deviation of the data values and the means of the data values were determined. The results were obtained in the form of counts, percentages, table, graphs and pie charts.

RESULTS AND DISCUSSION

1. PREVALENCE BASED ON AGE

Of the total 118 subjects 5 subs (4%) were in the age group of 31-40, 13 (11%), in the age group 41-50, 44 (37%) in the age group 51-60, 42 (36%) in the age group 61-70, 11 (9%) in the age group 71-80Prevalence was more in age group 51-60.

Table 1: Age Distribution.

Age Interval (Years)	N= 118	Percentage
31-40	5	4
41-50	13	11
51-60	44	37
61-70	42	36
71-80	11	9
81-90	3	3

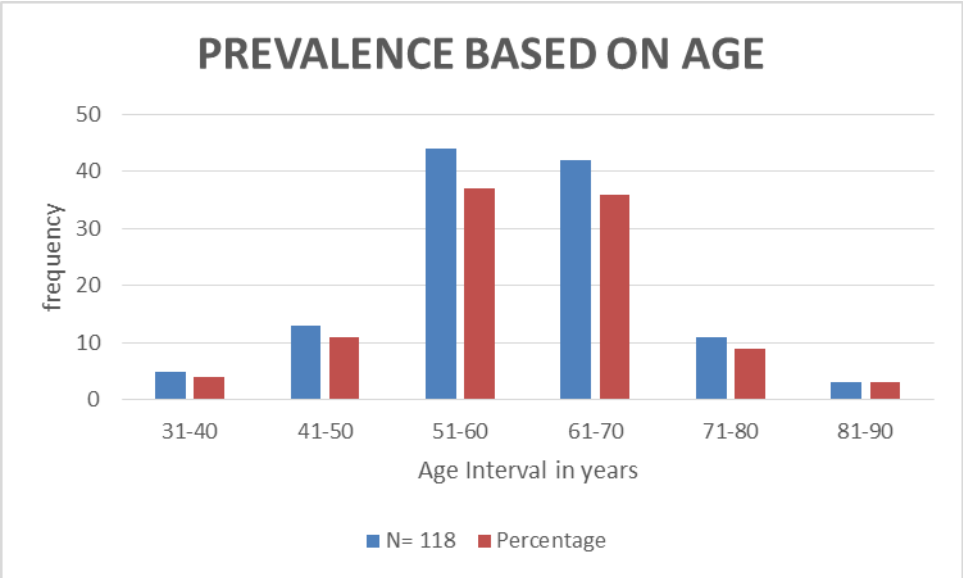

Figure 1: Age Distribution.

2. PREVALENCE BASED ON GENDER: The study shows that the cardiovascular diseases are more prevalent in male 85 subjects (72%) when compared to female 33 subjects (28%).

Table 2: Gender Distribution.

Gender	N	Percentage
Male	85	72
Female	33	28

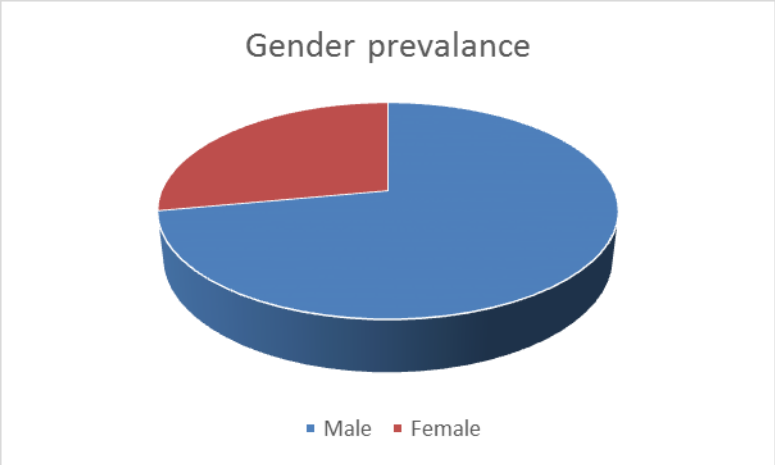

Figure 2: Gender Distribution.

3. Prevalence of CVS Disease Conditions Prevalence of Cardiovascular diseases seen were unstable angina 54 subjects (46%), NSTEMI 65 (55%), CAD 79 subjects (67%), ACS 39 subjects (33%), inferior lateral wall STEMI 14 subjects (12%), secondary angina 6 subjects (5%), acute inferior wall STEMI 16 subjects(14%), microvascular angina 7 subjects (6%), anterior lateral STEMI 6 subjects (5%), inferior wall STEMI 2 subjects (2%), ADHF 20% (24 subs), DCMP 17% (20 subs), mild LV dysfunction 40% (56 subs), aortic stenosis (7 subs) 6%, valvular disease (15 subs) 13%, heart failure with reserved ejection fraction (7 subs) 6%, heart failure with preserved ejection fraction 1% (1 sub), deep vein thrombosis (6 subs) 5%, mitral valve regurgitation (12 subs) 10%, peripheral vascular disease (6 subs) 5%, chronic rheumatic heart disease (1 sub)1 %, hypertrophic CMP (2 subs) 2%.

Table 3: Prevalence of CVS Disease Conditions.

Total	***Diagnosis***
54	Unstable Angina
65	NSTEMI
79	CAD
39	ACS
14	Inferior lateral wall STEMI
6	Secondary angina
16	Acute inferior wall STEMI
7	Microvascular angina
6	Anterior lateral STEMI
2	Inferior wall STEMI
24	ADHF
20	DCMP
47	Mild LV dysfunction
56	Moderate LV dysfunction
7	Aortic stenosis
15	Valvular disease
7	HFrEF- Heart failure with reserved EF
1	HFpEF- Heart failure with preserved EF
6	DVT- deep vein thrombosis
12	Mitral valve regurgitation
6	Peripheral vascular disease
1	Chronic rheumatic heart disease
2	Hypertrophic-CMP

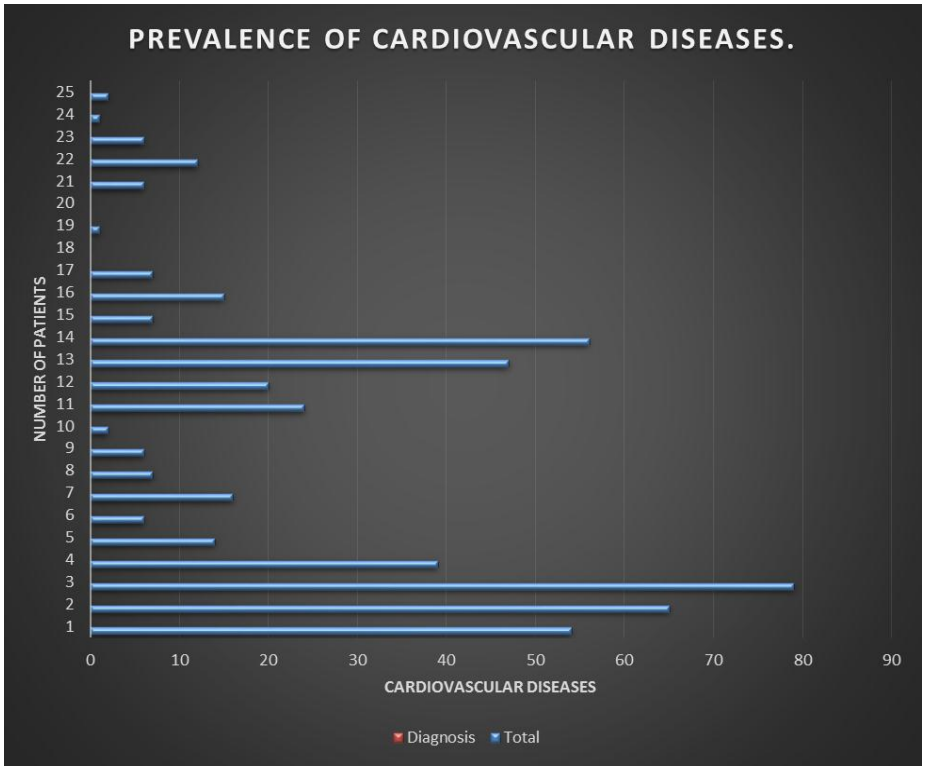

Figure 3: Prevalence of CVS Disease Conditions.

4. Distribution of Comorbidities Based on Age Interval Among the subjects, 109(92%) subjects were HTN, 107(91%) subjects were DM, 66(56) subjects were renal disease, 31(26%) subjects were thyroid disease, 91(77%) subjects were respiratory disease, 118(100%) subjects were cardiovascular disease sufferer.

Table 4: Distribution of Comorbidities Based on Age Interval.

Comorbidity	Total	Age Interval					
		31- 40	41- 50	51- 60	61- 80	71- 80	81- 90
HTN	109(92)	8	14	49	25	11	2
DM	107(91)	4	9	39	41	11	3
Renal disease	66(56)	2	4	16	31	10	3
Thyroid disease	31(26)	0	3	17	10	1	0
Respiratory disease	91(77)	4	10	26	37	11	3
CV disease	**118(100)**	**5**	**13**	**44**	**42**	**11**	**3**

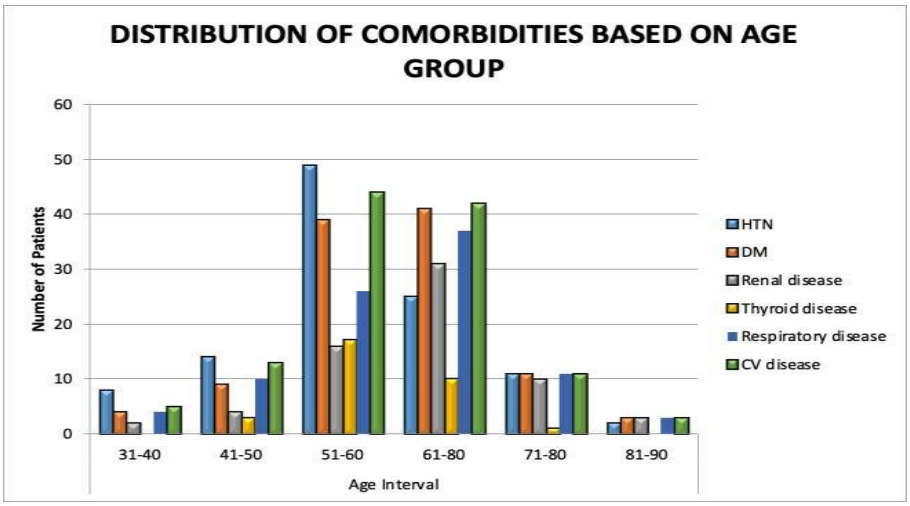

Figure 4: Distribution of Comorbidities Based on Age Interval.

5. Comparison of Cardiovascular markers based on Risk of MI

Table 5: Comparison of Cardiovascular markers Based on Risk of MI.

Parameter	Mild	Moderate	Severe	P Value
PTT	13.83±0.88	14.23±1.76	11.59±1.42	<0.0001*
aPTT	41.22±1.80	39.44±3.12	36.44±5.07	<0.0001*
INR	1.67±0.22	2.17±0.21	1.32±0.25	0.0474*
Troponin	2.10±1.31	1.59±0.91	1.68±0.54	0.0307*
CRP	1.80±0.77	1.29±0.68	1.41±0.52	0.0097*
Pro BNP	765.2±134.6	1951±179.6	2781±264.3	<0.0001*
Serum calcium	7.03±1.27	7.54±1.22	7.09±0.75	0.0823
Serum sodium	150.3±6.78	150.9±6.04	151.6±7.70	0.0344*
Serum potassium	6.52±0.92	5.98±1.22	6.11±0.92	0.1402
Serum Creatinine	1.50±0.50	1.94±1.04	1.67±0.96	0.1209

*****Statistically significant difference exist in the mean of cardiovascular markers based on the risk of MI.

6. Blood Parameter Among the subjects, 11(9%) subjects are under normal Hb* range and 107((91%) subjects were under abnormal Hb* range, 63(53%) subjects were under normal WBC** range and 55(47%) subjects were under abnormal WBC range, 101(86%) subjects were under normal platelet count range and 17(14%) subjects were under abnormal platelet count range.

Table 6: Blood Parameter.

Parameter	Normal Count		Abnormal Count	
	N	%	N	%
Hb	11	9	107	91
WBC	63	53	55	47
Platelet count	101	86	17	14

7. **Social History** Among the subjects, 73(62%) subjects were smoker, 80(68%) subjects were alcoholic, 59(50%) subjects were tobacco user, 97(82%) subjects were practicing sedentary lifestyle and 102(86%) subjects were obese.

Table 7: Social History.

Social History	N	Percentage
Smoker	73	62
Alcoholic	80	68
Tobacco use	59	50
Sedentary lifestyle	97	82
Obesity	102	86

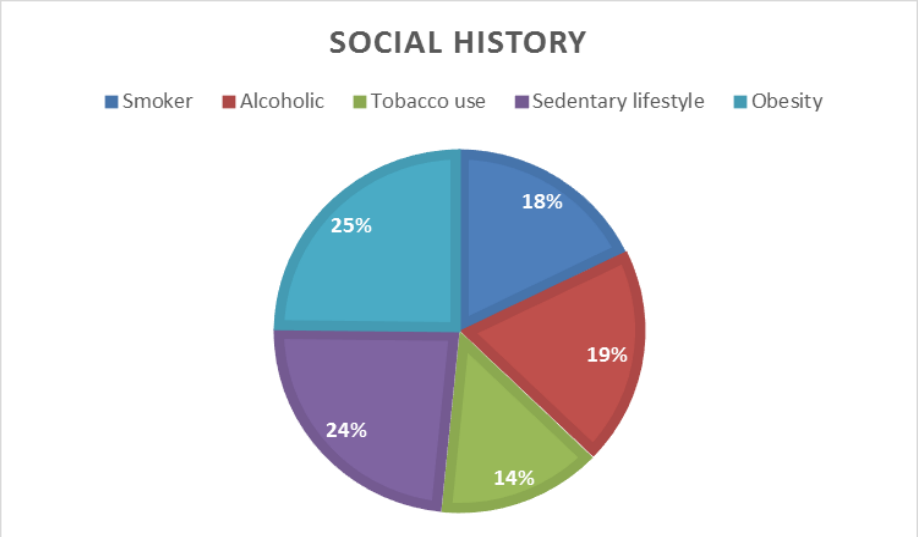

Figure 7: Social History.

1. Antiplatelet and Anticoagulant Usage Among the subjects, 62(53%) subjects were on anticoagulant alone, 118(100%) subjects were on aspirin alone, 38(32%) subjects were on aspirin and ticagrelor, 8(7%) subjects were on aspirin and clopidogrel, 25(21%) subjects were on anticoagulant + aspirin and ticagrelor, 7 (6%) subjects were on anticoagulant + aspirin and clopidogrel.

Table 8: Antiplatelet and Anticoagulant Usage.

Category	N	Percentage
Anticoagulant	62	53
Aspirin	118	100
Aspirin + Ticagrelor	38	32
Aspirin + Clopidogrel	8	7
Anticoagulant + Aspirin + Ticagrelor	25	21
Anticoagulant + Aspirin + Clopidogrel	7	6

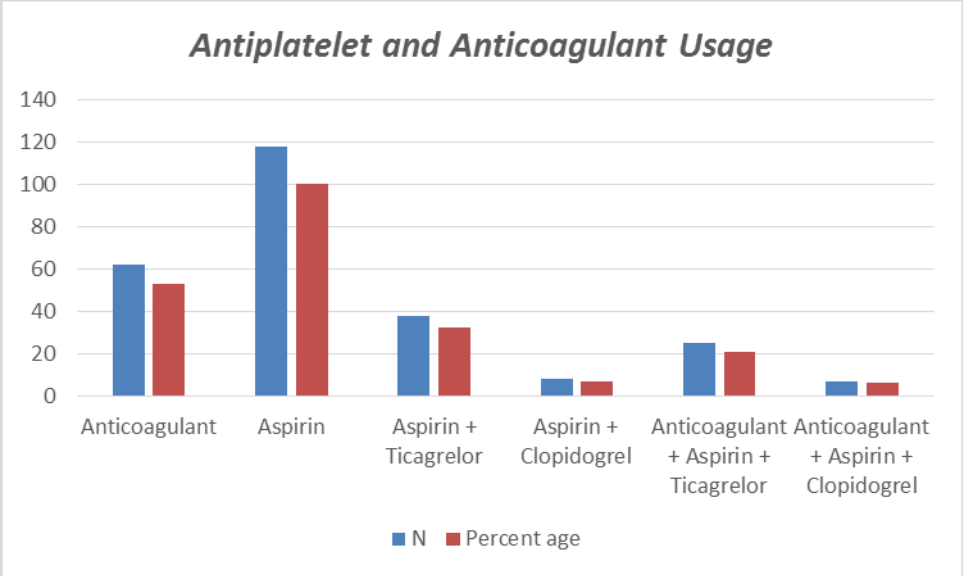

Figure 8: Antiplatelet and Anticoagulant Usage.

2. Distribution of Anti-hypertensives Based on Age Interval Among the subjects, 49(42%) subjects were prescribed with beta blockers, 89(75%) subjects with diuretics, 83(70%) with ACEs*, 76(64%) subjects with ARBs** and 57(48%) with CCDs***.

Table 9: Distribution of Anti-hypertensives Based on Age Interval.

Agents	Total	Age Interval					
		31-40	41-50	51-60	61-80	71-80	81-90
Beta blockers	49(42)	5	9	29	5	0	1
Diuretics	89(75)	3	7	25	41	11	2
ACEs	83(70)	4	8	35	28	5	3
ARBs	76(64)	3	8	31	26	5	3
CCBs	57(48)	0	3	9	32	11	2

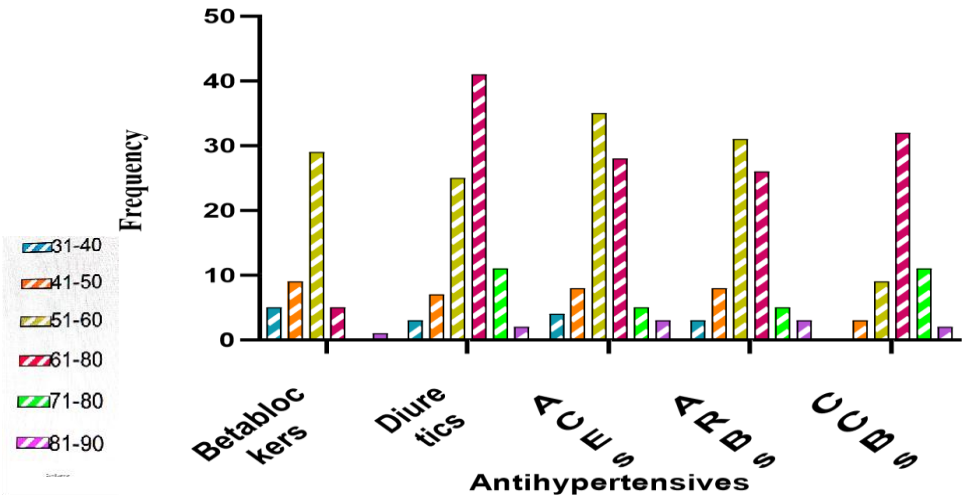

Figure 9: Distribution of Comorbidities Based on Age.

3. Other Categories of Drugs Used in this Study- Among the subjects, 104(88%) subjects were prescribed with oral hypoglycemics, 66(56%) subjects with insulin, 104(88%) with lipid lowering agents, 22(19%) subjects with anti thyroid agents, 118(100%) subjects with anti anginal agents and 83(70%) subjects with antibiotics.

Table 10: Other Categories of Drugs Used in this Study.

Drug	N	Percentage
Oral hypoglycemic agents	104	88
Insulin	66	56
Lipid lowering agents	104	88
Anti-thyroid agents	22	19
Anti-anginal agents	118	100
Antibiotics	83	70
Alprazolam	82	69
Anti-ulcer agents	118	100

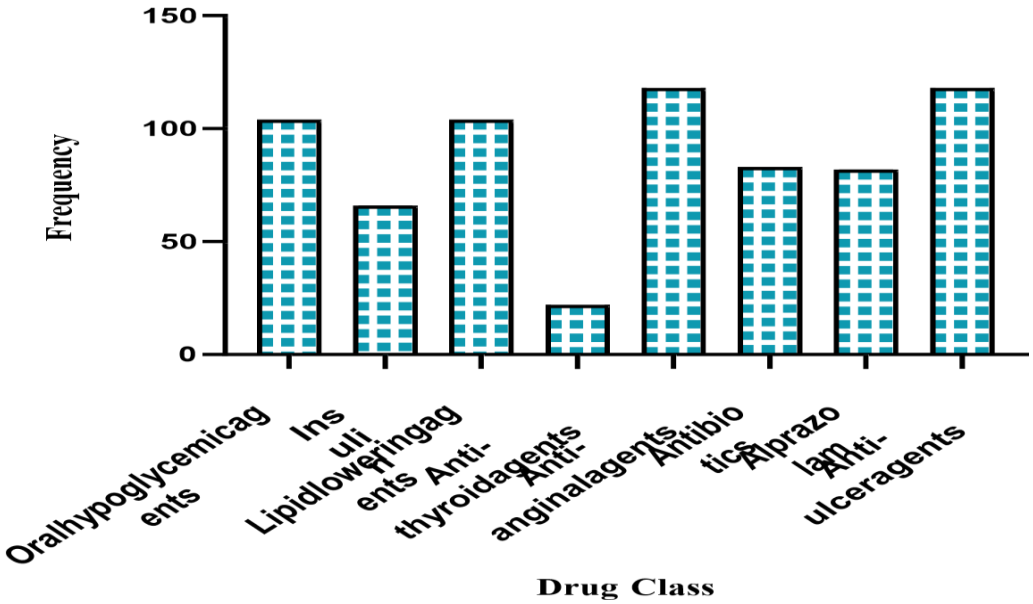

Figure 10: Other Categories of Drugs Used in this Study.

4. Based on Percutaneous Coronary Intervention Among the subjects, 95 subjects were seen with 1DES*, 16 subjects were seen with 2 DES* and 8 subjects were seen with 3 DES*.

Table 11: Based on Percutaneous Coronary Intervention.

PERCUTANEOUSCORONARY INTERVENTION	FREQUENCY
1DES*	95
2DES*	15
3DES*	8

*Drug eluting stent

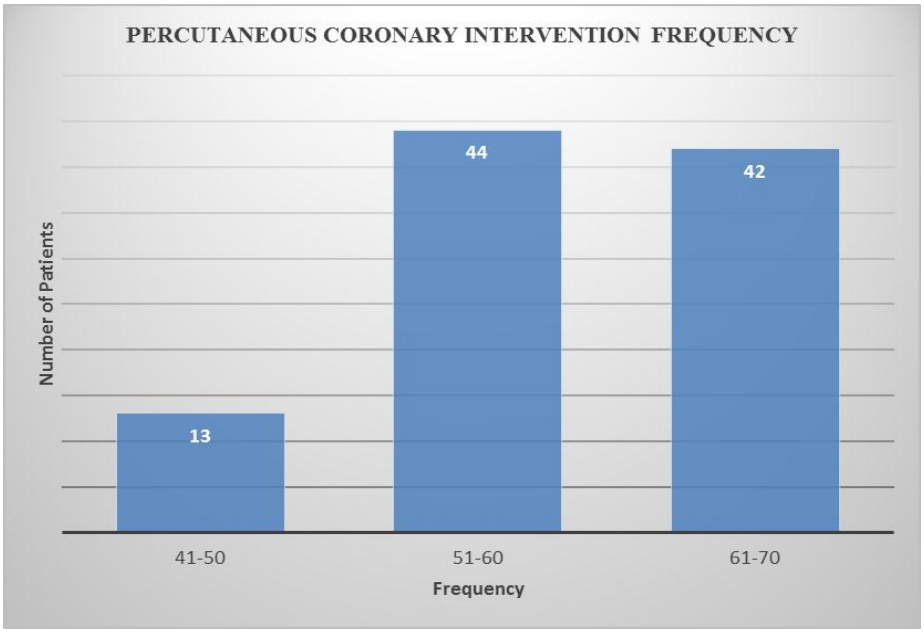

Figure 11: Based on Percutaneous coronary Intervention.

5. Based on Risk of Bleeding- Among the subjects, 41(41%) subjects were at mild risk, 54(46%) subjects were at moderate risk and 23(19%) subjects were at severerisk of bleeding.

Table 12: Based on Risk of Bleeding.

Bleeding Risk	N	Percentage
Mild	41	35
Moderate	54	46
Severe	23	19

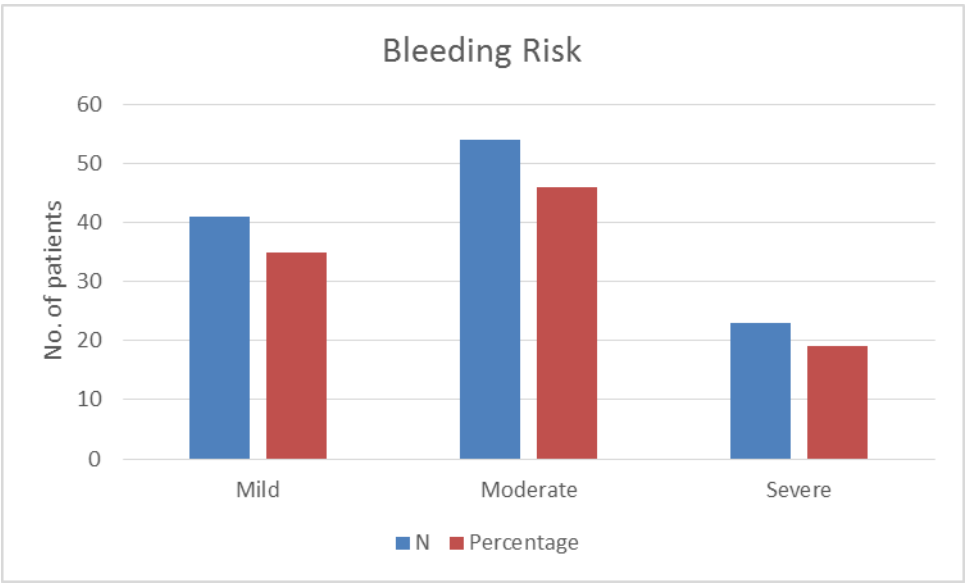

Figure 12: Risk of bleeding.

DISCUSSION

This prospective observational study was carried out on 118 subjects. To determine the prevalence of Cardiovascular diseases And utilization of anti-platelet drugs Patients with coronary artery disease and acute coronary syndrome with anti-coagulants and percutaneous coronary intervention, in this study we included CAD, angina, ACS and MI patients of age group ranging from 30years to 90 years of age. In this study the study data reveals that people between 41 to 70 years of age were having more prevalence of Cardiovascular diseases predominantly CAD-ACS, similarly Maurice Mittelmark et al, conducted a longitudinal prevalent study and has concluded increased risk of Cardio vascular diseases in older age population when compared with younger group.[1] (Figure 1) When considering the gender wise prevalence of CAD-ACS and other cardiovascular diseases the findings in our study currently provides a systematic understanding of increased risk of cardiovascular diseases in males when compared to that of females. Thus, males were more affected that females, (i.e. males were 72% and females 28%). (Figure 2)

Considering the diagnostics perspective the patients were diagnosed with several cardiovascular diseases and their frequency percentage was calculated as 46% for 54 Unstable angina cases, 55% for 65 NSTEMI cases, 67% for 79 CAD cases, 33% for 33 ACS cases, 14% for 12 Inferior lateral wall STEMI cases, 14% for 16 Acute inferior wall STEMI cases, 5% for 6 Anterior lateral STEMI cases, 2% for 2 Inferior wall STEMI cases, 6% for 7 Microvascular angina cases and 5% for 6 Secondary Angina cases, so out of 118 patients their were 79 of Coronary Artery Diseased patients which was found to be the mostly diagnosed disease in our study.(Table 3)

The study findings resulted that there were 23 differently diagnosed cardiovascular diseases in the 118 subjects of the study out of which these are mentioned as follows Unstable angina 54 cases, NSTEMI 65 cases, CAD 79 cases, ACS 39 cases, Inferior lateral wall STEMI 14 cases, Secondary angina 6 cases, Acute inferior wall STEMI 16 cases, Microvascular angina 7 cases, Anterior lateral STEMI 6 cases, Inferior wall STEMI 2 cases, ADHF 24 cases, DCMP 20 cases, Mild LV dysfunction 47 cases, Moderate LV dysfunction 56 cases, Aortic stenosis 7 cases, Valvular disease 15 cases, HFrEF- Heart failure with reserved Ejection Fraction 7 cases, HFpEF- Heart failure with preserved Ejection Fraction 1 case, DVT- deep vein thrombosis 6 cases, Mitral valve regurgitation 12 cases, Peripheral vascular disease 6 cases, Chronic rheumatic heart disease 1 case and Hypertrophic-Cardio- myopathy 2 cases. (Table 4 & Figure 4)

In figure 5 our statistical results revealed the age group between 51-80 were having more prevalence of comorbidities when compared to the other age groups, and we also found that people with longer life have very few comorbidities. The comorbidities were diagnosed as follows 109 cases of Hypertension, 107 cases of Diabetes Mellitus, 66 cases of Renal Diseases, 31 cases of Thyroid, 91 cases of Respiratory diseases and 118 cases of cardiovascular diseases were found, by our study results we presume that most of the patients with CAD, ACS, Angina and MI has hypertension and diabetes, out of which most of the women were suffering from Thyroid comorbidities as compared to that of females, the complications were seen as Renal disorders.(Table 5 & Figure 5) Atrial fibrillations and bradycardia were the most rhythm disorders found in our study when compared to tachycardia.(Table 6 & Figure 6) The Social history risk factors considered were tobacco use, smoking, alcohol, sedentary lifestyle and obesity. It was found that obesity and sedentary lifestyle contributes to the common social history risk factor, the results obtained from our study out of 118 subjects contributes as smokers 73 patients, alcoholic 80 patients, Tobacco using 59 patients, Sedentary lifestyle 97 patients and obese 102 patients. All these parameters contributes to worsening of Cardiac health of an individual.(Table 9 & Figure 7)

Comparison of Cardiovascular markers Based on Risk of MI was evaluated in our study and the patient risk intensity was categorized and scored as Mild, Moderate and Severe, In our study 23 patients were find to have increased risk of MI as such Severe score was adopted for them, 71 patients were found to have moderate Risk of MI and finally 24 patients were found to have low or Mild risk of MI, the calculation of comparison between Mild, Moderate and Severe was carried out by average meanof each cardiac bio-marker which was compared to that of standard normal value of it(biomarker), through which we can find out the accurate risk of MI risk and further we can categorize it into its intensity level (i.e Mild, Moderate & Severe). Total 10 parameters were considered, they are as follows Prothrombin Time ($p<0.0001$*), activated Partial Thromboplastin Time ($p<0.0001$)*, International Normalized Ratio ($p=0.047$)*, Troponin ($p= 0.0307$)*, C-Reactive Protein($p=0.0097$)*, Pro- BNP(<0.0001)*, Serum Calcium($p=0.083$), Serum Sodium($p=0.0344$)*, Serum Potassium($p=0.1402$), Serum Creatinine ($p=0.1209$). On performing the statistical analysis based upon our assumption PTT. Aptt, INR, Troponin, CRP, Pro-BNP, Sreum Sodium, these 7 parameters are having p value less than 0.05 and Serum Calcium, Serum Potassium and Serum Creatinine were having p value more than 0.05. Hence, according to our study only those 7 parameters are considered as standard parameters for measuring the risk of MI in patients according to our study.(Table 7)

On Blood picture examining in our study subjects we found out of 118 patients 107 patients were having abnormally low Hemoglobin, Hence all 107 patients falls under risk of anemia, 55 patients were found to

have abnormally increased WBC count and 17 patients are having abnormally decreased Platelet count. (Table 8)

The drug utilization and evaluation of anti-platelet and anti-coagulant usage was found that Aspirin was prescribed in 100% of patients, As our study has core objective of Drug utilization of Anti-platelet and anti-coagulants, we have categorized the prescription of these agents and has found the results in 6 categories and their prescribing are as follows Anticoagulant alone was prescribed to 62 patients, Aspirin alone in all 118 patients, Aspirin with Ticagrelor as a dual therapy in 38 patients, Aspirin with clopidogrel as a dual therapy in 8 patients, Anticoagulants with Aspirin with Ticagrelor as a triple therapy in 25 patients and Anticoagulants with aspirin and clopidogrel as a triple therapy in 7 patients. Hence by our results we state that the Antiplatelets and anticoagulants are used in CAD, ACS and MI patients, in which Aspirin is prescribed the most common and the dual therapy is prescribed as aspirin and Ticagrelor the most. For the most severe MI risked patients the combination of Antiplatelet and Anticoagulant as a triple therapy is prescribed, it is advised to regularly monitor the risk of Bleeding, as it is the most common adverse drug reaction, incases of bleeding the Vitamin K can be indicated to prevent bleeding. In our study the intensity of bleeding was evaluated based on the given parameters, INR-PTT, anti-thromboplastin usage and anti-thromboplastin prescribing. Majority of the patients were found to have moderate of bleeding risk. (Table 13 & Figure 11)

The drug evaluation of antihypertensive agents was done and was calculated based on the age intervals, the anti-Hypertensives prescribed were Beta blockers in 49 patients, Diuretics in 89 patients, Angiotensine Converting Enzyme inhibitors in 83 patients, Angiotensine Receptor Blockers in 76 patients and Calcium Channel blockers in 57 patients. In older aged groups mostly Diuretices and Calcium channel blockers were prescribed the most compared to that of younger age group. Overall 75% of patients were prescribed with diurectics. (Table 11 & Figure 9).

Other categories of drugs indicated in the study and were observed as Oral Hypoglycemic agents in 104 patients, Insulin in 66 patients, Hypolipideamic agents in 104 patients, Anti-Thyroid agents in 22, Anti-Anginal Agents in 118 patients, Anti-biotics in 83 patients, Alprazolam as an antianxiolytic agent in 82 patients and Anti-Ulcer agents in all 118 patients. Based upon the comorbidities to stabilize the patients health the Hypoglycemic agents and insulin was prescribed for Diabetes Mellitus, Hypolipideamic agents were prescribed for hyperlipidemia, Anti-thyroid agents were indicated for Thyroid abnormalities, Anti- biotics were indicated as a prophylaxis to prevent secondary and nosocomial infection, Anti-anxiolytics was prescribed to reduced anxiety and stress, And anti-ulcer agents were given to prevent ulceration in patients as the patient is concomitantly prescribed with NSAIDs which has the risk of developing ulcer followed with bleeding. (Table 12 & Figure 10)

Percutaneous Coronary Intervention was performed in all patients, we have evaluated 118 patients among them the Drug Eluting Stenting was done in all 118 patients, based upon severity of CAD and risk of MI and on the basis of prophylactic preventive measure from Ischemic attack the DES were inserted as follows 1 DES in 95 patients, 2DES in 15 patients and 3 DES in 8 patients. Majority of patients underwent 1 DES Percutaneous coronary Intervention.(Table 14 & Figure 12)

CONCLUSION

We have seen the presence of risk variables such as cigarette use, alcohol use, sedentary lifestyle, and obesity that are the most essential characteristics in the study after assessing patient's social history that support a cardiovascular health worsening, Our investigation of prevalence rates of various cardiovascular illnesses at the tertiary hospital cardiology department showed that CAD is the most prevalent condition. On analysis of predetermined biomarkers 7 cardiac biomarkers were statistically significant and other 3 were statistically insignificant due to which those were disregarded, based on our protocol we categorized patients into different levels of disease severity where we observed CAD as the most prevalent condition and chronic rheumatic heart disease was the least prevalent among our patient population.

On analysis of therapy we observed drug treatment and surgical interventions, in drug therapy mono(Aspirin), dual (aspirin with ticagrelor) and triple therapies (rivaroxaban, aspirin and ticagrelor) were observed. Our evaluation of Drug classes showed us aspirin was the most commonly used in Angina, CAD, ACS and MI. Risk of bleeding was moderate among patients who was on antiplatelet and anticoagulant therapy.

For the treatment of comorbid conditions diuretics was used highest for hypertension, metformin was most used drug for diabetes, levothyroxine for thyroid, among statins Atorvastatin was the mostly prescribed and anti-ulcer agents were prescribed for all patients though pantoprazole was predominantly prescribed.

In surgical interventions all the patients underwent PCI, among them most of them were inserted with only 1DES and a few were inserted with 2 DES where as in rare cases 3 DES were used.

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