

ORIGINAL ARTICLE**Assessment of prevalence of cardiovascular disease risk factors among known population**Gurpreet Singh¹, Saurabh Sharma²^{1,2}DM Cardiology Resident, Amrita Institute of Medical Sciences and Research, Kochi, Kerala, India**ABSTRACT:**

Background: The major cardiovascular risk factors (CVRFs) are known: diabetes, hypertension, dyslipidemia and smoking are associated with an increased risk of coronary heart disease. Controlling these factors has been shown to help reduce the CVD risk level. Hence; we planned the present study to assess various cardiovascular disease risk factors among known population. **Materials & methods:** A total of 200 patients reporting to the department of cardiology for routine medical and health check-up were included in the present study. Complete demographic and clinical details of all the patients recorded. Complete medical checkup of all the patients was done. In all the patients, biochemical and hematological profile was obtained. All the results were recorded in Microsoft excel sheet and were analyzed by SPSS software. **Results:** Diabetes, Hypertension, Smoking habit, Obesity and Dyslipidemia were the common CVD risk factors in the present study found to be present in 125%, 19%, 9%, 21% and 28% of the study population respectively. **Conclusion:** The authors conclude that various cardiovascular disease risk factors are present in significant proportion of population.

Key words: Cardiovascular, Risk factors.**Corresponding Author:** Dr. Gurpreet Singh, DM Cardiology Resident, Amrita Institute of Medical Sciences and Research, Kochi, Kerala, India**This article may be cited as:** Singh G, Sharma S. Assessment of prevalence of cardiovascular disease risk factors among known population. J Adv Med Dent Scie Res 2016;4(6):318-320.**INTRODUCTION**

Ischemic heart disease is the leading cause of death worldwide, followed by stroke and other cerebrovascular diseases. Cardiovascular disease (CVD) is still in the top two causes of mortality with a rate of 237/100,000 in 2006.¹⁻³ The major cardiovascular risk factors (CVRFs) are known: diabetes, hypertension, dyslipidemia and smoking are associated with an increased risk of coronary heart disease. Controlling these factors has been shown to help reduce the CVD risk level.⁴ The majority of the epidemiological studies from the region were descriptive and among samples of subjects or volunteers from the general population with little emphasis on the workers in their workplaces. The employees in any community represent the main workforce and their quality of life, health awareness, and adoption of healthy behaviors reflect on the overall productivity, economic growth, and the disease burden.⁵⁻⁷ Hence; we planned the present study to assess various cardiovascular disease risk factors among known population.

MATERIALS & METHODS

The present study was conducted in the department of cardiology and it included assessment of prevalence of

various cardiovascular risk factors among known population. Ethical approval was obtained from institutional ethical committee and written consent was obtained after explaining in detail the entire research protocol. A total of 200 patients reporting to the department of cardiology for routine medical and health check-up were included in the present study. Complete demographic and clinical details of all the patients recorded. Complete medical checkup of all the patients was done. In all the patients, biochemical and hematological profile was obtained. All the results were recorded in Microsoft excel sheet and were analyzed by SPSS software.

RESULTS

In the present study, a total of 200 patients were analyzed. Mean age of the patients of the present study was 48.5 years. 125 patients out of the total 200 were males while the remaining 75 were females. Majority of the patients belonged to the age group of more than 40 years. Diabetes, Hypertension, Smoking habit, Obesity and Dyslipidemia were the common CVD risk factors in the present study found to be present in 125%, 19%, 9%, 21% and 28% of the study population respectively.

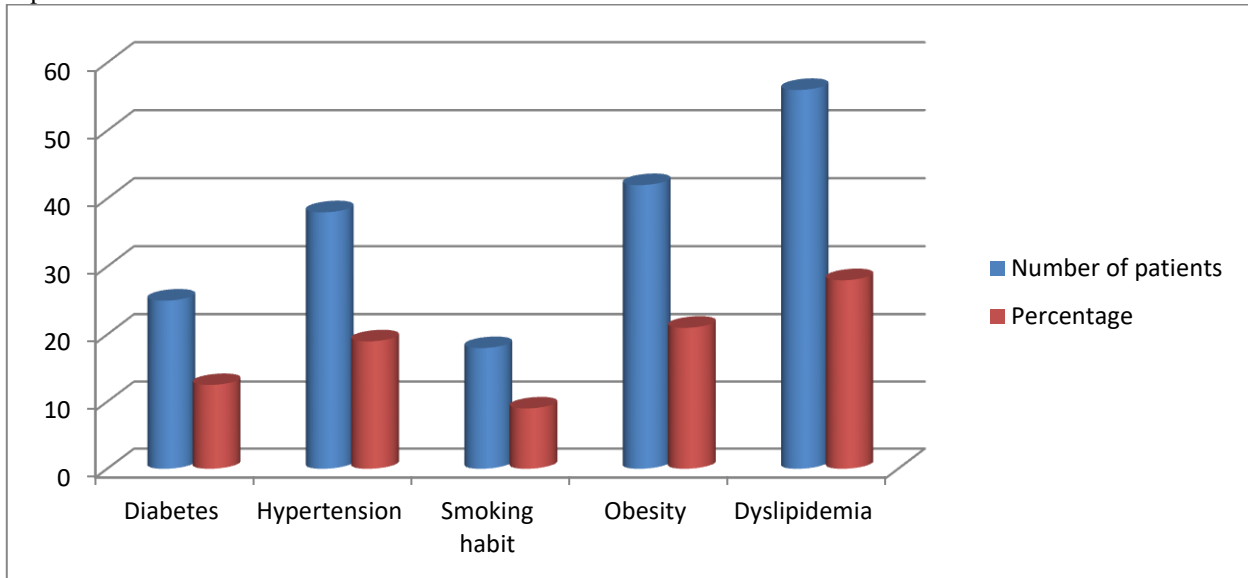
Table 1: Demographic data

Parameter		Number
Age group (years)	Less than 25	20
	25 to 40	45
	41 to 50	55
	51 to 60	50
	More than 60	30
Gender	Males	125
	Females	75

Table 2: Presence of risk factors

CVD risk factors	Number of patients	Percentage
Diabetes	25	12.5
Hypertension	38	19
Smoking habit	18	9
Obesity	42	21
Dyslipidemia	56	28

Graph 2: Presence of risk factors



DISCUSSION

Cardiovascular diseases (CVDs) are important causes of worldwide preventable morbidity and mortality. CVDs have become a leading cause of mortality and morbidity in developing countries and rates are expected to rise further over the next few decade.^{7,8} Total global mortality estimates showed that the top 3 causes of death in industrialized countries are hypertension, tobacco use, and high Body-mass index (BMI)—all high-profile risk factors for CVD. Furthermore, similar trends are now emerging in economically developing countries as the population aging and lifestyles in lower- and middle-income countries become more akin to those of wealthier nations.⁹⁻¹² In the present study, a total of 200 patients were analyzed. Mean age of the patients of the present study was 48.5 years. 125 patients out of the total 200 were males while the remaining 75 were females. Majority of the patients belonged to the age group of more than 40 years. Ming L et al determined the prevalence and management of CVD risk factors in hemophilia patients. A retrospective study of 58 adult hemophilia patients (≥35 years) were reviewed. The prevalence of CVD risk factors was hypertension 65.5%, diabetes 10.3%, smoking 12.5% and obesity 19.6%. A total of 31% did not have a lipid profile on record. Management of risk factors included antihypertensive medications in 84.2% and lipid-lowering agents in 12.1%. During their medical evaluation, four of seven active smokers received smoking cessation counseling and four of 11 obese patients received lifestyle modification advice. Eight patients (13.8%) experienced a CVD event:

myocardial infarction (MI) (n = 3), coronary artery disease (n = 2), both MI and ischemic stroke (n = 1) and hemorrhagic strokes (n = 2). Only five of eight patients were on low-dose aspirin, of which aspirin was discontinued in one patient after he was diagnosed with hemophilia following a bleeding work-up. Another patient on dual antiplatelet therapy post stent placement developed epistaxis resulting in clopidogrel cessation. Hemophilia patients are at risk for CVD, similar to the general age-matched male population. Screening for CVD risk factors, with preventive dietary and pharmacologic interventions, play a key role in the prevention and long-term management of CVD.¹³ Diabetes, Hypertension, Smoking habit, Obesity and Dyslipidemia were the common CVD risk factors in the present study found to be present in 12.5%, 19%, 9%, 21% and 28% of the study population respectively. Díez JMB et al investigated cardiovascular diseases such as ischemic heart disease, cerebrovascular disease and peripheral arterial disease, and cardiovascular risk factors such as age, sex, smoking, high blood pressure, hypercholesterolemia, hypertriglyceridemia, and diabetes mellitus. The patients' mean age was 49.1 (18.9) years and 53.5% were male. Cardiovascular risk factor prevalence's were: smoking, 35.2%; high blood pressure, 33.7%; hypercholesterolemia, 21.9%; hypertriglyceridemia, 12.7%; and diabetes mellitus, 15.8%. Overall, 57.9% of patients had at least 1 cardiovascular risk factor. Significantly more males presented with each risk factor (P<.05), apart from high blood pressure. Around 10% had cardiovascular disease,

with myocardial ischemia in 5.5%, cerebrovascular disease in 3.7%, and peripheral arterial disease in 2.4%. All except cerebrovascular disease were significantly more common in males ($P < .05$). The prevalence of cardiovascular disease was low in individuals < 55 years old, particularly women, and increased with age for all forms of disease. Some 68.3% were ≥ 65 years old. The high prevalence of cardiovascular risk factors was confirmed. Cardiovascular disease was more common in males and the elderly.¹⁴

CONCLUSION

Under the light of above obtained results, the authors conclude that various cardiovascular disease risk factors are present in significant proportion of population. However; further studies are recommended.

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