

AGE WISE DISTRIBUTION OF CORONARY ARTERY DISEASE RISK FACTORS

Nita A Tanna¹, Rakesh Srivastava², Vilpa Tanna³

¹ Department of Anatomy, SBKSMI & RC, Piparia, Baroda, Gujarat, India

² Department of Statistics, MS University, Baroda, Gujarat, India

³ Department of Community Medicine, GMERS Medical College, Baroda, Gujarat, India

Correspondence to: Nita Tanna (drnitatanna@gmail.com)

DOI: 10.5455/ijmsph.2013.190720131

Received Date: 18.07.2013

Accepted Date: 19.07.2013

ABSTRACT

Background: Coronary Artery Disease (CAD) is the leading cause of death in most industrialised countries (about one-third of all deaths) and somewhat low incidence is observed in the developing countries.

Aims & Objective: To study age wise distribution of Coronary Artery Disease risk factors.

Material and Methods: The data for this study was collected from Baroda Heart Institute & Research Centre (BHIRC). The total 208 patients were considered for study of CAD.

Results: The majority of our patients were from age group of 60-69 years i.e. 67 (32.21%) and only 10 patients (4.32%) were in the age group of ≥80 years. Amongst all patients, 93.27% were lacking exercise, 39.42% were hypertensive, 28.85% were obese, 27.88% diabetic, 10.58% had family history of CAD and 5.28% were smokers.

Conclusion: It is essential to identify CAD risk factors amongst the Indians to tackle the problem. So this study would be of great help in this direction.

Key-Words: Atherosclerosis; Coronary Artery Disease (CAD); Risk Factors

Introduction

Ischaemic Heart Disease (IHD)^[1] is defined as acute or chronic form of cardiac disability arising from imbalance between the myocardial supply and demand for oxygenated blood. Since narrowing or obstruction of the coronary arterial system is the most common cause of myocardial anoxia, the alternate term 'Coronary Artery Disease (CAD)' is used synonymously with IHD. Men develop CAD earlier than women and death rates are also slightly higher for men than for women until the menopause.

In 90% of cases^[1], CAD is caused by coronary atherosclerosis, while in 10% cases, it is caused by superadded changes in coronary atherosclerosis and non-atherosclerotic causes like vasospasm of one of the major coronary arterial trunks in patients with no significant atherosclerotic coronary narrowing, stenosis of coronary ostia, arteritis, embolism, thrombotic diseases, contusion of a coronary artery from penetrating injuries, extension of dissecting aneurysm of the aorta and compression of a coronary artery from outside by a primary or secondary tumour of the heart may result in coronary occlusion.

From an epidemiological perspective^[2], a risk factor is a characteristic or feature of an individual or population that is present early in life and is associated with an increased risk of developing future disease. The underlying risk factors for atherothrombosis are smoking, hypertension, hyperlipidaemia, insulin resistance and diabetes, physical activity, obesity, mental stress, depression, etc.

With the exception of diabetes and obesity^[2], the prevalence of most cardiovascular risk factors has declined in the United States over the past 40 years. These favourable U.S. trends suggest that interventions to reduce risk can be highly effective when applied in appropriate settings, as evidenced not only by reductions in coronary disease but also by reductions in stroke. Prevention on an international scale is thus a feasible goal. So we have conducted a study to evaluate various risk factors of CAD age wise in Indian population. So management of the disease is possible at an early stage.

Materials and Methods

We have collected the secondary data from

Baroda Heart Institute & Research Centre (BHIRC) for a period of one year i.e. from April 2006 to March 2007. The total 208 patients were considered for study of CAD, out of which 123 were males and 85 were females.

We have considered various factors which are supposed to have a serious and positive effect on the occurrence of the disease; they are gender, age, blood pressure, serum creatinine, diabetes mellitus, family history of CAD, smoking, etc.

The whole information was collected from the case papers of each patient which are stored in the hospital record room. As they are the authentic source of the diagnosis made on a patient because it gives the exact status of the patient's working condition of other system also, later on which proves an important step in providing the patient, the best lifesaving drugs and treatment for his/her fast recovery.

Results

Table-1: Age wise Distribution of CAD Risk Factors

Age (Years)	Diabetes Mellitus (%)	Hypertension (%)	Smoking (%)	Family History of CAD (%)	Lack of Exercise (%)	Obesity (%)	Total (%)
≤39	1 (6.66)	5 (33.33)	1 (6.67)	3 (20)	14 (93.33)	2 (13.33)	15 (7.21)
40-49	9 (30)	12 (40)	4 (13.33)	1 (3.33)	28 (93.33)	10 (33.33)	30 (14.42)
50-59	11 (20.75)	18 (33.96)	2 (3.77)	5 (9.43)	49 (92.45)	16 (30.18)	53 (25.48)
60-69	25 (37.31)	34 (47.76)	3 (4.47)	11 (16.41)	64 (95.55)	24 (35.82)	67 (32.21)
70-79	9 (27.27)	9 (27.27)	1 (3.03)	1 (6.06)	31 (93.93)	7 (21.21)	33 (15.86)
≥80	3 (30)	4 (40)	0 (0)	1 (10)	8 (80)	1 (10)	10 (4.32)

Patients were of different age groups in our sample. Out of which maximum number of individuals belongs to age group 60-69 i.e. 67 (32.21%) and only 10 patients (4.32%) were in the age group ≥ 80 years.

Discussion

In this study, we have evaluated CAD risk factors. Amongst the 208 CAD patients, 59.13% were males and 40.87% were females; 32.21% belongs to age group of 60-69 years and only 4.32% belongs to age group of ≥80 years. Lack of exercise is the most common risk factor for CAD followed by hypertension, obesity, diabetes mellitus, family history of CAD and smoking.

While in Africa^[3], the most common risk factor for CAD is smoking, followed by diabetes and increased body mass index which differs from our study. In Faizal P study^[4], dyslipidaemia (79.28%) was found to be most prominent risk factor, followed by hypertension (54.92%), diabetes (43.51%) and smoking (43.48%). This shows that hypertension, obesity, lack of exercise, diabetes mellitus, family history of CAD and smoking are common risk factors of CAD but their distribution vary in different communities.

Conclusion

Patients are of different age groups in our study. Out of which maximum number of individuals belongs to age group of 60-69 years i.e. 67 (32.21%) and only 10 patients (4.32%) were in the age group of ≥ 80 years. Majority of our patients were males 59.13%. Here, lack of exercise has emerged as one of the commonest risk factor for CAD. This study shall stand as a good reference for others to evaluate risk factors for CAD.

References

1. Mohan H. Textbook of Pathology. 5th ed. New Delhi: Jaypee Brothers; 2005. 305-354.
2. Ridelr PM, Libby P. Risk Factors for Atherothrototic Disease. In: Bonow RO, Mann DL, editors. Braunwald't Heart Disease: A Textbook of Cardiovascular Disease. 8th ed. London: Elsevier. 2008: 1003-1026.
3. Pal RK, Grera A. Coronary Artery Disease in Africa: Community based study of Risk Factors. BJMP 2010; 3(2):326.
4. Faizal P, Acharya LB, Padmakumar R, Boppana K. Pandey S. Evaluation of risk factors and in-hospital outcomes in patients with coronary artery disease in a tertiary care teaching hospital. Int J Pharm Tech Res. 2009; 1 (4): 1378-1386.

Cite this article as: Tanna NA, Srivastava RS, Tanna VA. Age wise distribution of coronary artery disease risk factors. Int J Med Sci Public Health 2013; 2:954-955.

Source of Support: None

Conflict of interest: None declared