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Sedentary life style and incidence of cardiovascular diseases (CVDS) in urban human adults of Muzaffarpur (Bihar)

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Abstract : Cardiovascular diseases are the number one cause of death globally, more people die annually from CVDs than from any other cause. An estimated 17.3 million people died from CVDs in 2008, representing 30% of all global deaths of these deaths, an estimated 7.3 million were due to coronary heart disease. By 2030, almost 25 million people will die from CVDs mainly from heart disease and stroke. These are projected to remain the single leading cause of death.

The study has revealed that the sedentary life style, tobacco use harmful use of alcohol, unhealthy diet, physical inactivity, higher BMI and Diabetes are the most important risk factors for cardiovascular diseases

. Key words: Cardiovascular disease, Sedentary life, Urban human.

INTRODUCTION

Cardiovascular diseases (CVDs) are a group of disorders of the heart and blood vessels and they include:

- * Coronary heart disease-disease of the blood vessels supplying the heart muscles.
- * Cerebrovascular disease-disease of the blood vessels supplying the brain,
- * Peripheral arterial disease-disease of blood vessels supplying the arms and legs.
- * Rheumatic heart disease-damage to the heart muscle and heart valves from rheumatic fever, caused by streptococcal bacteria.
- * Congenital heart disease-malformation of heart structure existing since birth.
- * Deep vein thrombosis and pulmonary embolism-blood clot in leg veins, which can dislodge and move to the heart and lungs.

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Heart attacks and strokes are usually acute and are mainly caused by a blockage that prevents blood from flowing to the heart or brain. The most common reason for this is due to of fatty deposits on the inner walls of the blood vessels that supply the heart or brain. Strokes can also be caused by bleeding from a blood vessel in the brain or from blood clots.

Cardiovascular disease is the leading cause of deaths world wide since 1970s, cardiovascular mortality rates have declined in many high income groups. At the same time cardiovascular death and disease have increased at a fast rate in low-and-middle income groups. The effects of unhealthy diet and physical inactivity may show up in individuals as raised blood pressure, raised blood glucose raised blood lipids, overweight and obesity. The intermediate risks factors can be measured in primary care facilities which will indicate an increased risk of developing a heart attack, stroke, heart failure and other complications.

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cardiovascular than from any other cause. By 2030, almost 25 million people will die from CVDs mainly from heart disease and stroke. These are projected to remain the single leading cause of death 7.5 million deaths each year, or 13% of all deaths can be attributed to raised blood pressure. This includes 51% of deaths due to strokes and 45% of deaths due to coronary heart disease.

MATERIAL AND METHODS:

The study was conducted in Urban area of Muzaffarpur (Bihar) with 50 (25 males and 25 Females) cardiovascular diseased patients which were selected for this study. An Interview schedule was formulated to elicit information on family profile of the patients, personal habits of the patients and Body Mass Index (BMI) of the patients. The responses on various aspects were collected from

From Table II it is evident that the highest incidence of CVDs was observed among males educated up to graduate level (48%) and in the case of females it was observed by intermediate level (36%). The study further revealed that the incidence of CVDs was the highest (72% and 80%) for males and females respectively in the sedentary working category. The incidence of CVDs was highest (98% and 52%) for males and females respectively in the higher income group (Rs. 26000-80000).

Table III depicts that from among 25 male respondent and 25 female respondent, alcohol was consumed only 8 male CVDs patients. 4 male patient and 2 female patients smoked cigarettes. 8 male patients and 2 female patients were consuming. Pan Parag and other Pan Masala only one patient consume tobacco leaves 19 female

Table – I: Family Profile of CVDs Patients

Variables	Male	Female	Total
	N=25(50)	N=25(50)	N=50(100)
Types of family			
Nuclear	18(72)	20(80)	38(76)
Joint	7(25)	5(20)	12(24)
Size of the family			
1-4	8(32)	9(36)	17(34)
4-6	10(40)	9(36)	19(38)
6-8	6(24)	5(20)	11(22)
Above 8	1(4)	2(8)	3(6)
Marital Status			
Married	23(92)	24(96)	47(94)
Unmarried	2(8)	1(4)	3(6)

the selected cardiovascular patients.

50 respondents were subjected to anthropometric measurement namely, height and weight. From this the Body Mass Index (BMI) was calculated .

RESULT AND DISCUSSION

Data pertaining to family profile of CVDs patients have been presented in table I. It is evident the most of the respondents (18males and 20 females) belonged to nuclear families, which most probably stimulated cardiovascular diseases. This study further revealed that the majority of the respondents has a family size of ranging from 4 to 6 (36) only 1 male CVDs patient and 2 female (CVDs) patients had a family size of above 8 members. Most of the respondents were married.

patient did have any of the above items. Most of the male patients were having any one of the habits and it could be risk factors for the CVD.

The BMI pictorially represented in Fig. I most of the male patients having BMI above 30 and grade II obesity. In the female CVDs patients also observed that grade I obesity is higher. Because of obesity is a known factor of cardiovascular disease (CVDs). Only 16 percent (4) female CVDs patients and 24 percent (6) male CVDs patient having normal BMI (20.0-25.0). It is observed that higher BMI is a also very strong factor of cardiovascular diseases in both the groups.

SUMMARY AND CONCLUSION

Present study was conducted on 50 confirmed

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Table – II : Personal Profile of CVDs Patients

Variables	Male	Female	Total
	N=25(50)	N=25(50)	N=50(100)
Literacy Level			
Matric	3 (12)	5(20)	8(16)
Intermediate	4(16)	9(36)	13(26)
Graduate	12(48)	7(28)	19(38)
Post Graduate	5(20)	4(16)	9(18)
Occupation			
Sedentary	18(72)	20(80)	38(76)
Modrate	5(20)	4(16)	9(18)
Heavy	2(8)	1(4)	3(6)
Income level in Rs			
Less than			
5000	1(4)	1(4)	2(4)
6000-15000	1(4)	2(8)	3(6)
16000-25000	6(24)	5(20)	11(22)
26000-80000	12(48)	13(52)	25(50)
Above 80000	5(20)	4(16)	9(18)

Table – III : Personal Habit of the CVDs Patients

Variables	Male	Female	Total
	N=25(50)	N=25(50)	N=50(100)
Habits			
Alcohol	8(32)	-	8(16)
Betal leaves and Nuts	4(16)	2(8)	6(12)
Cigarette	4(16)	2(8)	6(12)
Pan Masala	8(32)	2(8)	10(20)
Tobaco leaves	1(4)	-	1(2)
Nil	-	14(76)	14(38)

cardiovascular disease patients (25 males and 25 females) in urban area of Muzaffarpur district of Bihar. The occurrence of cardiovascular diseases was highest in nuclear type families in both the groups (males and females). The incidence of cardiovascular diseases was highest (72% and 80%) for male and females respectively in the sedentary working category because sedentary life style is a risk factor of cardiovascular diseases. The study also revealed that the higher income (Rs 80,000 and above) is also directly related to cardiovascular diseases. The persons belonging to higher income group are more prone to heart diseases because the don't take any type of physical activity and they take unhealthy diet which is only rich in carbohydrates and fats. The effects of

unhealthy diet and physical inactivity may show up in individuals as raised blood pressure, raised blood glucose, raised blood lipids and overweight and obesity. There intermediate risks factors can be measured in primary care facilities which will indicate an increase risk of developing a heart attack, stoke, heart failure and other complications.

Personal habits like cigarette smoking, tobacco consumption, chewing of tobacco leaves and pan masala consumption of alcohol were common among male CVDs patients. It is seen that the most important behavioural risk factors of heart disease and stoke are tobacco use and harmful use of alcohol. Behavioural risk factors are responsible for about 80% of cardiovascular diseases in male and females. Study of the body mass of the

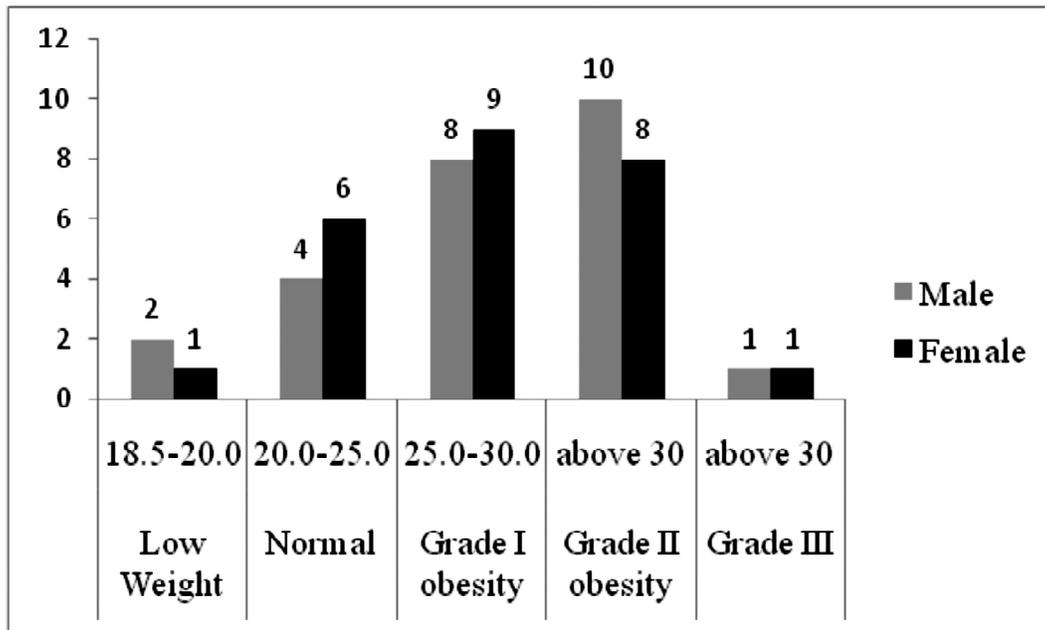


Figure 1: BMI of CVDs Patients

respondents showed that the majority of male CVDs patients were obese. Because higher body mass Index increases the risk of cardiovascular disease.

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