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A comparative study of prevalence of hypercholesterolemia among males and female

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Abstract

Hypercholesterolemia is also called dyslipidemia is the presence of high levels of cholesterol in the blood. It is a form of high blood lipids and "hypercholesterolemia" (Elevated levels of lipoproteins in the blood). Cholesterol is a waxy, fat like substance that forms foods that come from animals particularly egg yolks, Meat, Poultry, fish and dairy products. The body needs this substance to build cell membranes, make certain hormones, and produce compounds that aid in fat digestion. Too much cholesterol however increase a person's risk of developing heart disease. A study undertaken with objectives of –

- i. To detect the Hypercholesterolemia patient among male and female.
- ii. To see the rate of occurrence of hypercholesterolemia among Gomoh District.
- iii. To see the life style Dietary pattern of hypercholesterolemia in male and female.

A Total no. of 74 respondents of males and females sex of aged group 40-70 years from Gomoh town Dhanbad district was randomly selected suffering from hypercholesterolemia. For the data collection a structured survey schedule were developed consist of general profile, anthropometric measurement, dietary survey, 24 hours dietary recall and clinical assessment. Among the subject studied majority of the respondents were highly (55%) educated. All following dietary pattern non-vegetarian (100%) were respondents were Breakfast, Lunch, Dinner", Majority of the respondents were liked to take cereals, pulses, and fat daily while 36% of the respondents were never liked to take sugar and its suffering from diabetic. A respondents as they were products were hypercholesterolemia sign and systems. It was observed from 24 hours dietary recall that all the nutrients were above the RDA as given by ICMR, 2010. The intake of protein and fat was comparatively high than the RDA.

Keywords: hypercholesterolemia, dyslipidemia, nutrition

Introduction

Hypercholesterolemia is a condition characterised by very high levels of cholesterol in the blood. Cholesterol is a waxy fat like substance that is produced in the body and obtained from foods that come from animals (particularly egg yolk meat, poultry fish and dairy products.) The body needs this substance to build cell certain hormones and produce compounds that aid in fat membranes, make digestion. Too much cholesterol however, increase a person's risk of developing heart disease.

People with hypercholesterolemia have a high risk of developing a form of heart disease called coronary artery disease. The condition occurs when excess cholesterol in the blood stream in deposited in the walls of blood vessels particularly in the arteries that supply blood to the heart (coronary arteries). The abnormal build up of cholesterol forms clumps (plaque) that narrow and harden artery walls. As the clumps ger bigger, they can clog the arteries and restrict the flow of blood to the heart. The build up of plaque in coronary arteries causes a form of chest pain called angina and greatly increases a parsons risk of hearing a heart attack. Inherited forms of hypercholesterolemia can also causes health problems related to the fluid up of excess cholesterol in other tissues. If cholesterol accumulates in tendon, it cause characteristic growth called tendon exanthemas. These growths most often affect the Achilles tendon and tendon in the hands and fingers yellowish cholesterol deposits known as xanthlometer. Chick stick can also under the skin of the eyelids are accumulated at the edges of the clear front surface of the eye (the cornea) leading to a gracyolonerd ring called an arcuscornealis. Hypercholesterolemia also called dyslipidemia is the presence of cholesterol in the blood. It is a form of high blood lipids and hyperlipoproteinemia (elevated levels of lipoproteins in the blood).

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Elevated levels of non HDL cholesterol and LDL in the blood may be a consequence of diet obesity inherited (genetic) disease (such as LDL receptor mutations in familial hypercholesterolemia) or the presence of other disease such as diabetes and underactive thyroid. Cholesterol is one of three major classes of lipids which all animals cells use to constrict their membranes and is thus manufactured by all animal cells. Plant cells do not manufacture cholesterol It is also the precursor of the steroid hormones and bile acids. Since cholesterol is insoluble in water, is transported in the blood plasma within protein particles (lipoproteins) Lipoprotein are classified by their density. Very low density lipoprotein (VLDL), Low Density lipoprotein (LDL) intermediate density lipoprotein (IDL) and high density lipoprotein (HDL). All the lipoprotein carry cholesterol but elevated levels of the lipoprotein other than HDL (learned non- HDL cholesterol) with an increased risk of atherosclerosis and coronary heart disease. In contrast higher levels of HDL cholesterol are protective.

Avoiding trans fats are replacing saturated fats in adult diets with polyunsaturated fats are recommended dietary measures to reduce total blood cholesterol and LDL in adult. People with very cholesterol (eg familial hypercholesterolemia) diet is often not sufficient to achieve the desired lowering of LDL and lipid lowering medications are usually required. If necessary other treatment such as LDL. Apherisis or even surgery (for particularly severe subtypes of familial hypercholesterolemia) are performed. About 35 million adults in the United States have high blood cholesterol.

The study was undertaken with the purpose to raise awareness about Heart Health. Vice president Hamid Ansari strongly favoured the head to develop a Comprehensive approach to combat heart disease in India which is on its way to becoming an epidemic in the country. Many deaths occur due to heart diseases if people become aware of their heart health and initial measures taken earlier many lives can be saved.

This study was conducted with the following objectives

1. To detect the Hypercholesterolemia patient among male and female.
2. To see the rate of occurrence of Hypercholesterolemia among Gomom District.
3. To see the life style & Dietary pattern of Hypercholesterolemia

Materials and Methods

The area selected for the present study was the town Gomah dist. Dhanbad. This area was selected due to good rapport established and the cooperation extended by the people. The male and female who were age of 40 to 70 yrs and belong to nuclear and joint family and their educational level of matric Inter and graduate. It was expected they could give all the information in nutritional condition. To suit the sample interview was selected. Interview method involves presentation of verbal stimuli and reply in terms of verbal responses (Kothari 1993). This enables verbal interaction between the respondent and interviewer in a face to face situation enabling the interviewer to clarify the doubts raised by the respondent. It is possible to probe and get a more detailed information wherever necessary. The interview schedule include questions on general information related to family background, Dietary Survey, Anthropometric measurement, Biochemical Assessment, Clinical Assessment and sign and symptoms.

General Information

The general information collected about the respondents.

Age

It was found that respondents were in the age group 40-50 years

55% were in the age group of 51-60 years and 40% were in the age group of 61-70 years.

Sex

It was found that majority of the respondents 45% were females.

Family Type

It was found that majority of the respondents 41% were from joint

and 58% respondents were from belonged to the nuclear family

Education Level

It was found that 55% respondents were studied in Graduation, 25%

were in Inter and 18% respondent were in Matric.

Occupation of Respondents

About 2% of the families were engaged in service and 17% families were engaged in business.

Food Habits

All the respondents were non -Vegetarian. All respondents (100%) were consuming cereal and its product daily. 100% respondents were consuming pulses daily. 77% respondents were consuming green leafy vegetables daily and 22% were consuming weekly. All the respondents were consuming root & tubers daily. All the respondents were consuming other vegetables daily. 66% respondents were consuming fruits weekly and 33% were consuming occasionally. 28% respondent were consuming milk daily, 16% respondents were consuming milk weekly and 57% respondent were consuming milk occasionally. 54% respondents were consuming meat weekly and 45% respondent were Consuming occasionally. 6% respondents were consuming egg daily 52% respondent consuming weekly and 40% respondent consuming occasionally. 22% respondents were consuming fish weekly and 77% respondent consuming occasionally. 100% respondents were consuming fats and oil. 36% respondents were consuming sugar daily and 63% respondents are not consuming sugar and jiggery.

Limitations

- As the study was conducted for a short period of time on limited number subject, it may not be appropriate to generalize the findings for large number of populations.
- The one day survey for food consumption did not given proper
- information of non- Vegetarian food consumed among the families.

Suggestion

- More researches on the topic could be done for a longer period of time on a large sample sizes, the result may be more authentic in all aspects.
- Arranging a nutrition education and awareness programme in respect to give knowledge on harmful effect of over and under intake of nutrients on their health

- Arranging a awareness programme to give them knowledge about sanitation and hygiene.

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