

Research Article

CORRELATION OF BMI WITH LIPID PROFILE IN ADULT FEMALES

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ABSTRACT

The present study aimed at assessing the effect of body mass index on lipid profile among adult females. Obesity is important risk factor of dyslipidemia and other related complications. The current study was done to correlate anthropometric indices with lipid profile of individuals. Dyslipidemia is abnormal increase of lipids in body, it is manifested by high levels of cholesterol, low density lipoproteins, and triglycerides. It has gained lot of importance due to various risk factors implicated in causing coronary artery diseases.

Keywords: BMI, Dyslipidemia, Obesity

INTRODUCTION

Obesity is major health issue prevailing in developing countries which is increasing mortality and morbidity of any given population. Different methods are used to measure obesity one of it is body mass index that has an effect on lipid profile.

Body mass index can distinguish lean and fat body mass. Fat deposits in body are converted to cholesterol and circulate in peripheral blood stream, resulting in high blood pressure and cardiovascular diseases.

The WHO regards BMI of less than 18.5kg/m² as underweight. Body mass index is a measure of human body shape based on individual s mass and height.

It is used as to find how much body weight required for given height of individual the excess weight can be accounted for body fat.

The WHO regards a BMI of less than 18.3kg/ m² as underweight while greater than 25kg/m² overweight. A study done by Kivimaki *et al.*, (2008) it is widely demonstrated that BMI is excellent predictor of cardiovascular risk.

BMI values do not correspond to same degree of fatness indifferent populations because of ethnic variation in body composition. Studies show that black individuals have higher BMI compared to white but compared to percentage of fat in body is similar in blacks and white.

By contrast percentage of fat is more in Asian than in Caucasians for a given BMI. More over in a given BMI body fat varies in men and women.

In a study done by Malina (2005), Variation in body composition associated with sex differentiation, it was stated that because men develop more lean body mass especially bone mass and muscle, body fat is more in female, percentage of body fat is more in females than in males for same BMI.

BMI generally used as mean of correlation between groups and serve as means of estimating obesity. It is easy to recognize sedentary, overweight individuals by BMI.

It has got its own limitations and short comings it overestimates adiposity with more lean account body mass. BMI also don't account for body frame size, person may be of small frame but has more fat deposits.

BMI varies with sex as in males have lean body mass, less fat deposits more muscle mass, more skeletal mass in comparison to females

MATERIALS AND METHODS

The participants of study were adult females of age group 25 to 50 years of age group. History was taken thoroughly and general examination was done, blood samples were taken for lipid profile.

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RESULTS AND DISCUSSION

Results

Table 1: Age Distribution

Age	Frequency	Percent
25 -29	13	4.9
35-39	70	33.9
45-49	85	22.7
55-59	54	17.6

Table 2: Anthropometric Profile

BMI B(KG/ M2)	FREQUENCY	PERCENT
<18.5	24	7.8
18.5 TO 24.8	200	65.4
25 TO 29.9	62	20.3

Table 3: Lipid Profile

	Frequency	Percent
CHOLESTROL	<200 190	62.1
	>200 116	34.7
LDL	<100 80	73.9
	>100 226	98.2

Discussion

The present study showed that there was significant positive correlation of body mass index and lipid profile. BMI was high in subjects of age 45-50 years. Which shows menopause has greater effect on body fat and lipid profile. Females in younger age group can increase physical activity and prevent overweight and prevent complications as estrogen levels decrease during menopause and can affect lipid profile. However, because of difficulty in obtaining body fat measures of body height and weight are being used to identify overweight and obesity. Body Mass Index is frequently used as an index to measure obesity, BMI do not however measure weight which is related to distribution of fat and increased muscle mass, which affects health risk, it is good but not perfect surrogate to body fatness. In my study it has been noted that BMI along with lipid profile do has correlation with abdominal obesity and its other effects. In a study done by Zang *et al.*, (2004) Anthropometric predictors of Coronary Heart disease in Chinese females, it was predicted that increased waist hip ratio is related to coronary heart diseases among females.

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