

Effects of Physiological and Biochemical Changes in Females Regarding Obesity

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ABSTRACT

Introduction: Obesity is presently so common inside the world's population that it is starting to replace under nutrition and infectious diseases as the foremost noteworthy supporter to sick health. In specific, weight is related with diabetes mellitus, coronary heart illness, certain shapes of cancer, and sleep-breathing disorders. Accumulation of excessive fat in body is referred as obesity but this does not take under consideration the morbidity and mortality related with more unassuming degrees of overweight, nor the inconvenient impact of intra-abdominal fat. The worldwide plague of obesity comes about from a combination of genetic susceptibility, expanded accessibility of high-energy nourishments and decreased requirement for physical activity in present day society. Obesity should no longer be assuming as simple issue affecting certain people, but an epidemic that undermines worldwide well being.

Objective: To identify the effects of obesity in females and guide regarding healthy life style

Material and Methods

Study design: Quantitative cross sectional

Settings: Sharif Medical City Hospital

Duration: Six months i.e. 1st January 2022 to 30th June 2022

Data Collection procedure: It was quantitative cross sectional study. There were 150 females who participated in the study. Informed consent was taken. Age was in between 30-45 years. All participants divided into two groups. In group one normal included 50 females as control group and in group two 100 obese females were present. 5ml venous blood was collected in the vials and stored. Levels of systolic and diastolic blood pressure, serum cholesterol, Triglycerides, LDL, HDL, Blood sugar fasting and BMI were calculated in both groups.

Results: The results were significant as p value less than 0.005. All parameters were compared in both normal and obese group and noticed that obese group having high values as compared to normal group in terms of blood pressure both systolic and diastolic, Cholesterol, LDL, HDL, Triglycerides, BSF and BMI levels.

Conclusion: Obesity and depressive disorders are common co morbidities and have discrete, however overlapping, pathoetiology. It shows up that weight has direct toxic brain impacts. The co-occurrence of obesity and depressive disorders are exceedingly related with adverse wellbeing outcomes. Treatment openings ought to start with anticipation and pre-emption. Outcomes in weight and depressive disorders may be expanded by an approach that takes these two conditions into consideration. Worldwide, the number of obese individuals is rising at an alarming rate. Present study portrayed the negative effects of obesity in ladies. The findings of this research were a sign for obese ladies with respect to life threatening medical complications since of their overweight.

Keywords: Obesity, BMI, LDL, HDL, Cholesterol, Blood Pressure

INTRODUCTION

Obesity causes or worsens numerous health problems, both freely and in association with other diseases. In particular, it is related with the advancement of type 2 diabetes mellitus, coronary heart disease (CHD), an expanded frequency of certain shapes of cancer, respiratory complications (obstructive rest apnoea) and osteoarthritis of weight bearing joints¹⁻³. The worldwide plague of obesity comes about from a combination of genetic susceptibility, expanded accessibility of high-energy nourishments and decreased requirement for physical activity in present day society. Obesity should no longer be assuming as simple issue affecting certain people, but an epidemic that undermines worldwide well being^{4,5}.

Leptin is a hormone produced by fat cells and is secreted into our circulatory system. In those who are obese, leptin levels tend to be higher than in those who are not over weight because fat produces leptin. Insulin signals can be misplaced in obese individuals, resulting in tissues that are unable to control glucose levels. The sex hormone levels of both men and ladies changes according to age which is related with changes in body fat distribution. A study appeared that need of estrogen leads to excessive weight gain. Obese people have lower development hormone levels than healthy weight people, according to research. Obesity is additionally related with low-grade persistent inflammation within the fat tissue. Numerous sicknesses, including heart disease, stroke, and cancer, are made more likely in obese

individuals. Weight is also linked to a shorter life expectancy and a lower standard of living^{5,6}.

Osteoporosis and muscular atrophy can be caused by obesity. This is referred to as osteosarcopenic obesity develops weakness of the bones, which can increase the hazard of fractures and other physical disabilities. Most osteoporosis-related fractures happen within the hip, wrist, and spine. Bone is living tissue that is continually being broken down and replaced. Muscle atrophy can result from a need of physical work out, bad nourishment, heredity, and certain therapeutic issues. After a long period of inactivity, muscle atrophy can occur. The body will steadily break down a muscle in case it isn't utilized, in arrange to preserve vitality. The important signs of muscle atrophy are shortcoming in one arm and or one leg, trouble walking or adjusting and facial weakness^{7,8}.

MATERIAL AND METHODS

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Results

The results were significant as p value less than 0.005. All parameters were compared in both normal and obese group and noticed that obese group having high values as compared to normal group in terms of blood pressure both systolic and diastolic, Cholesterol, LDL, HDL, Triglycerides, BSF and BMI levels.

Table 1: Group One normal females

No.	Variable	Units	Mean	+SD
1	Systolic BP	mm.Hg	119	+0.02
2	Diastolic BP	mm.Hg	81	+0.01
3	Serum Cholesterol	mg/dl	176	+8.5
4	Triglycerides	mg/dl	145	+0.03
5	LDL	mg/dl	105	+0.02
6	HDL	mg/dl	65	+10.5
7	BSF	mg/dl	101	+4.5
8	BMI	Kg/m ²	20.5	+0.22

Table 2: Group Two Obese females

No.	Variable	Units	Mean	+SD
1	Systolic BP	mm.Hg	140	+0.04
2	Diastolic BP	mm.Hg	95	+0.01
3	Serum Cholesterol	mg/dl	215	+9.9
4	Triglycerides	mg/dl	185	+10.5
5	LDL	mg/dl	132	+11.2
6	HDL	mg/dl	45	+2.5
7	BSF	mg/dl	126	+7.8
8	BMI	Kg/m ²	32.2	+10.5

DISCUSSION

The findings of present research very close relationship with previous researches. All the parameters of group-B individuals presented remarkable changes as compared with control group which are similar to various other research findings. Bhaskaran et al., (2014) described⁹ in their study that due to high BMI levels different metabolic abnormalities are originated in biological framework which may create different life threatening diseases. Different studies stated that the blood serum levels of cholesterol, triglycerides, LDL increased while HDL become decreased in obese individuals which are very dangerous for cardiac wellbeing. In another study the findings were very clear almost increased levels of lipid profile with respect to cardiac complications. Systolic and diastolic blood weight is also directly proportional to the BMI, and it has demonstrated by different studies that unusual high blood pressure caused very serious medical complications like brain hemorrhage, kidney failure and paralysis¹⁰.

Weight, BMI, intra-abdominal and overall obesity are not associated with fat collection within the liver, which is characterized by a number of indications of insulin resistance in normal weight and normal BMI. Indeed in the event that a person's weight is close to normal but little changes in weight might lead to a rise in liver chemicals. The clinical 5F fat, female, fair, fertile, and forty states that gallstone incidence is higher within the overweight and in fact exceedingly tall in obesity within the medical community. Chance of coronary artery disease (CAD) is increased by any weight gain from a baseline BMI. The interface between BMI and coronary course disease (CAD) may be most noteworthy in terms of dyslipidemia^{11,12}.

CONCLUSION

Obesity and depressive disorders are common co morbidities and have discrete, however overlapping, pathoetiology. It shows up that weight has direct toxic brain impacts. The co-occurrence of obesity and depressive disorders are exceedingly related with adverse wellbeing outcomes. Treatment openings ought to start with anticipation and pre-emption. Outcomes in weight and depressive disorders may be expanded by an approach that takes these two conditions into consideration. Worldwide, the number of obese individuals is rising at an alarming rate. Present study portrayed the negative effects of obesity in ladies. The findings of this research were a sign for obese ladies with respect to life threatening medical complications since of their overweight.

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