Evaluation of Obesity as a Major Contributory Factor causing in Type 2 Diabetes in urban population

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ABSTRACT

Different researchers through their studies concluded that diabeties type 2 in both male and female caused by obesity. Atherosclerosis and stress induced diabeties were produced by obesity in individuals.The findings of current study were similar as to the previous studies. In the present study BMI and random glucose levels of Group A, Group B and Group C were (38±13, 27±20, 20±11), (280±31, 200±21, 130±12) respectively. This study showed a significant change in blood glucose levels in group B and group C as compared to the control group A.
Key words: Obesity, BMI, Atherosclerosis, diabeties type 2.

INTRODUCTION

In obesity a person shows excess weight than the normal. Obesity is an abnormal medical condition of a body regarding physiologically and pathologically. Number of metabolic disorders developed in the obese body (Deurenberg et al, 1999).Medically a person has obesity, if he has a high body mass index.   Doctors comparatively used a tool i.e. body mass index (BMI) to identify the level of obesity of a person. For this purpose they consider weight for their age, sex, and height. The body mass index value between 25 and 29.9 highlight that a person has high weight than the normal.While A BMI of 30 or indicated that a person has obesity (LaForgia et al, 2009).

Similarly the ratio of waist-to-hip size, waist-to-height ratio and the fat distribution in the body play an important role in a phenotypically presentation of a body. Different researchers stated in their studies that chances of diabeties type 2 become increased in obese people. In adult individuals diabeties type 2 is very common (Whitaker et al 1997).

Insulin does not use properly in case of type 2 diabetes in the body because receptors do not show mutual relationship with insulin. Healthy diet and physical activity are necessary for the patients with type 2 diabetes. But oral drugs or insulin are required to keep their blood glucose levels under control. In diabetic person blood glucose levels may increase or decrease. It has concluded through different research studies that hyperglycemic and hypoglycemic both are harmful for humans (Wheeler et al 2004).

Researchers concluded through their studies that insulin resistance in the body developed because of overweight stress insides of individual cells. Endoplasmic reticulum is a membranous network inside of cells therefore overeating stress sends out an alarm signal telling the cell to dampen down the insulin receptors on the cell surface. Ultimately insulin resistance developed high concentrations of blood glucose which is a perfect sign of diabetes (Tanna et al 2013).

MATERIALS AND METHODS

This study was conducted in Jinnah hospital Lahore. 200 individuals were selected for current study 100 obese diabetic individuals were placed in Group A and 50 diabetic with normal weight individuals were in Group B whereas 50 normal individuals were in Group C, i.e. control group. BMI and glucose levels were finding biomarkers of each group. Body mass index (BMI) was measure of body fat based on height and weight. Random glucose levels were measured through colorimetric method. Raw data was expressed bio-statistically by applying the model (SPSS).

RESULTS

The values of BMI mean standard deviation of individuals of Group A, Group B and Group C were (**38±13, 27±20, 20±11**) and random glucose levels were (**280±31, 200±21, 130±12**) respectively.

Group A: Diabetic obese individuals

Biomarkers	Mean ± SD	P value
BMI	38±13	0.00
Glucose levels mg/dl	280±31	0.00

<0.005

Group B:Diabetic non-obese individuals

Biomarkers	Mean ± SD	P value
BMI	27±20	0.00
Glucose levels mg/dl	200±21	0.00

<0.005

Group C: individuals (control)

Biomarkers	Mean ± SD	P value
BMI	20±11	0.00
Glucose levels mg/dl	130±12	0.00

<0.005

DISCUSSION

Luppino et al, (2010) stated in their study that diabeties in both male and female caused by obesity. In another research it was concluded that diabeties myocardial

infarction and other cardiac complication of atherosclerosis are produced by obesity in individuals Chang *et al, (2003)*.Weitz *et al, (2010)* find in their study that stress induced diabeties in humans developed by overweight. The findings of current study showed very similar results as to the previous studies. In the present study the BMI levels ofGroup A, Group B and Group C were (38±13, 27±20, 20±11) while random glucose levels were (280±31, 200±21, 130±12) respectively. This study showed a significant change in blood glucose levels in group B and group C as compared to the control group A. The results of present study were very similar to the previous studies in which different researchers found that diabeties is correlated with obesity Clifton *et al, (2009)* ,Noakes *et al, (2005).*

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