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Original Article

Correlation Between Metabolic Syndrome and Prevalence Obesity in Albanian Population

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ABSTRACT

Objectives & Background: *As the obesity is one of the most common disorders in medical practice associated with significant increases of both morbidity and mortality and in Albania there is not known the prevalence of obesity and correlation between obesity and metabolic syndrome I make these study to estimate prevalence of obese patients.*

Methods: *We chose random patients for study among registered population near health center number 10 Tirane, Albania.*

We measured height and weight and calculated BMI and among them, we took historical information about age , family history of obesity, and other diagnosis. we selected those with metabolic syndrome among obese patients and calculated the percentages.

Results: *Obesity main factor for metabolic syndrome among 40-60 year old patients especially woman .*

Interpretation & Conclusion: *In 2930 screened individual 28.7 were obese and among obese patient at age 40-60 years 54% of obese patient have metabolic syndrome.*

Keywords: *obesity, metabolic syndrome, cardiovascular, diabetes mellitus*

1. Introduction

Metabolic syndrome (syndrome x insulin resistance syndrome) consist of metabolic abnormalities that confer increased risk of cardiovascular disease (CVD) and diabetes mellitus(DM) First description of the metabolic syndrome occurred in the early twentieth. [4] Major features of the metabolic syndrome include obesity, hypertriglyceridemia, low HDL cholesterol, hyperglycemia, and hypertension.

Glycemic > 110
Obesity BMI > 30
HTA > 140/90
TG > 150mg/dl
HLDL < 40 men
HLDL < 50 women

Obesity is determined as saxes of adipose tissue. It is calculated by BMI (BODY MASS INDEX) > 30. BMI is equivalent to body weight in kilograms (height in meters) 2

According to NIH(national institutes of health)define BMI
Normal BMI 18-24.9
Overweight BMI 25-29.5
Obesity BMI over 30
Health consequences of obesity are; hypertension, type 2 of diabetes , hypertriglyceridemia, cardiovascular disease and metabolic syndrome.

2. Background

Pathophysiology of metabolic syndrome :
From an expended adipose tissue are released free fatty acids(FFAs).these ones result in an glucose ,triglycerides and secretion of very low density lipoproteins. Lipid/lipoprotein abnormalities include reductions of HDL cholesterol and an increase of low-density lipoproteins (LDL) Free fatty acids also reduce insulin sensitivity in muscle. Increases of circulating glucose increase insulin secretion, resulting in sodium re-absorption due to hyperinsulinemia. [3] Hyperinsulinemia may result increased sympathetic nervous system activity .These ones contribute in hypertension. From adipocytes production of interleukin 6 and tumor necrosis factor results in more insulin resistance and lipolysis of adipos tissue.
Despite the fact that even not obese patient have the risk to have metabolic syndrome we wanted to see prevalence of obese people and the importance of obesity for health consequences to metabolic syndrome. [1-2] From a study done on the relationship of obesity in adults and obese children were seen that children obese since 3 years old had the greater predisposition to be obese when grow up. Obesity is one of the main causes for worsening of chronic diseases. [11]
In many studies made were seen that obesity has worsened health for : 600 million patients with hypertension,177 million patients with diabetes mellitus 20 million patients affected by cancer and 20 million people with the artery heart disease . [12]
Only in 2005 obesity caused death for 35 million people in the world also being associated with other diagnoses such as diabetes mellitus, cancer, cardio vascular disease, hypertension. [13]
Prevalence of metabolic syndrome varies across the globe, in part reflecting the age and ethnicity of survey (NHANES) population studied and the diagnose criteria applied. [8] The highest recorded prevalence worldwide is in Native Americans in the United States, metabolic syndrome is less common in African-American men but more common in Mexican-American women. [6] Based on data from the National Health Nutrition

Examination the metabolic syndrome in United States is 35%. In France a 34-64 year cohort shows a <10% prevalence for each gender, although 17.5% are affected in 60-64 age range. [5]

3. Methods

We screed 2930 people chosen near health center number 10 Tirana, Albania. We measured their height in m and weight in kg. We classified them in groups :
In 850 patient from 15-19 years 50 of them were obese
In 560 patent from 20-29years 99 of theme were obese
In 730 patient 30-39 years 205 of them were obese
450 40 60 years 299 woman of them were obese
340 40-60 years 189 men of them were obese
In these sample according to criteria of diagnosis (OBSH) for metabolic syndrome for people 45-60 year old 250 of them had metabolic syndrome which mean that approximately 54%of obese people at these age have metabolic syndrome. obesity is an important factor in metabolic syndrome. Another important information from these study was the % of obese people in Albanian .

Table 1 Obesity Results	
Age Group	%
15-19 years	5.9 % obese
20 29 years	17% obese
30-39 years	28% obese
40-60 years	66.4 % obese women
40-60 years	55.5 % obese men

From Table 1 is noted that with the increase of age we have an increase number of obese people and an increase of metabolic syndrome.

4. Conclusion

Most of obese people taken in these study had one of their parents obese, these due to same diet,life habit or genetics. Between the years in Albania obesity (BMI) has increased these due to sedentary life and diet and environmental factors.

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