Prevalence and clinical characteristics of metabolically unhealthy obesity in an Iranian adult population.

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Abstract

PURPOSE:

The incidence of obesity is globally increasing and it is a predisposing factor for morbidity and mortality. This study assessed the prevalence of metabolically unhealthy (MU) individuals and its determinants according to body mass index (BMI).

MATERIALS AND METHOD:

In our cross-sectional study, 891 persons aged 30 years or older participated. Participants were classified as obese (BMI ≥30 kg/m^2), overweight (BMI 25-<30 kg/m^2 and normal weight (BMI <25 kg/m^2). Metabolic health status was defined using four existing cardio-metabolic abnormalities (elevated blood pressure, elevated serum concentrations of triglyceride and fasting glucose and a low serum concentration of high density lipoprotein cholesterol). Then, two phenotypes were defined: healthy (existence of 0-1 cardio-metabolic abnormalities) and unhealthy (presence of 2 or more cardio-metabolic abnormalities).

RESULT:

Overall, 10.9% (95% confidence interval (CI): 8.8-13.0) and 7.2% (95% CI: 5.5-8.9) of participants were MU obese and metabolically healthy obese, respectively. The prevalence of MU was higher in overweight (55.6%; 95% CI: 50.6-60.6, $p<0.001$) and obese (60.2%; 95% CI: 52.8-67.6, $p=0.001$) subjects than in individuals with a normal weight (37.5%; 95% CI: 29.4-42.6). Multiple logistic regression analysis showed an association of a MU state with age and dyslipidaemia in the BMI subgroups and with female sex in the normal weight individuals.

CONCLUSION:

The prevalence of a MU state increased with increasing BMI. Ageing and dyslipidaemia were associated with an unhealthy metabolic state in normal weight, overweight and obese subjects and with the female sex in normal weight subjects.

KEYWORDS:

Iran; metabolically healthy; metabolically unhealthy; obesity; overweight; prevalence