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Metabolic syndrome in metabolic obese, non-obese elderly in northern Taiwan

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Author(s)

Meng-Ting Tsou

ABSTRACT

Background: The prevalence of metabolic syndrome is high in non-obese adult individuals, but less research focusing on elderly group. We aimed to assess the prevalence rates of metabolic syndrome (MetS) and its individual components in metabolic obese, non-obese elderly population in northern Taiwan (body mass index [BMI] < 27 kg/m^2). Methods: A cross-sectional survey was conducted among elderly people (⩾65 y/o) who received a senior citizen health examination from March to November 2009. A total of 1180 participants (433 men, 36.7%; 748 women, 63.3%) were investigated. The prevalence and odds ratios of metabolic syndrome, as defined by the modified Adult Treatment Panel III (ATP III), were analyzed in the following BMI groups: <18.5 kg/m^2, 18.5 - 24 kg/m^2, 24 - 27 kg/m^2, and ⩾27 kg/m^2. Results: The prevalence of metabolic syndrome increased with BMI in both women and men ($P < 0.001$) in this study. A higher prevalence of MetS was found in the overweight and obesity groups and also in women with normal BMI. The mean body weight of individuals with MetS was higher than that of those without MetS across BMI groups, especially in the normal BMI group. The odds ratios for MetS were 1.06 (95% confidence interval: 1.01 - 1.11) for women and 1.11 (1.01 - 1.21) for men with BMI 18.5 - 24 kg/m^2, and 1.09 (1.02 - 1.17) for men with BMI 24 - 27 kg/m^2. Conclusions: Elderly individuals in the BMI belong to normal and overweight groups have a relatively high prevalence and increased risk of developing MetS. Therefore, physicians should perform screening examinations for MetS and its risk factors not only in obese patients but also in non-obese elderly patients to prevent Mets. This electronic document is a "live" template. The various components of your paper [title, text, heads, etc.] are already defined on the style sheet, as illustrated by the portions given in this document.

KEYWORDS

Non-Obese; Body Mass Index; Metabolic Syndrome; Elderly

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References

[1] Department of Health (2011) The Executive Yuan. Statistics Report, Taiwan.

[2] Haffner, S.M., Valdez, R.A., Hazuda, H.P., Mitchell, B.D., Morales, P.A. and Stern, M.P. (1992) Prospective analysis of the nsulin-resistance syndrome (syndrome X). Diabetes, 41, 715-722. doi:10.2337/diabetes.41.6.715

[3] Isomaa, B., Almgren, P., Tuomi, T., Forsén, B., Lahti, K., Nissén, M., et al. (2001) Cardiovascular morbidity and mortality associated with the metabolic syndrome. Diabetes Care, 24, 683-689. doi:10.2337/diacare.24.4.683

[4] Trevisan, M., Liu, J., Bahsas, F.B. and Menotti, A. (1998) Syndrome X and mortality: A population-based study. Risk factor and life expectancy research group. American Journal of Epidemiology, 148, 958-966. doi:10.1093/oxfordjournals.aje.a009572

[5] Huang, K.C., Lee, M.S., Lee, S.D., et al. (2005) Obesity in the elderly and its relationship with cardiovascular risk factors in Taiwan. Obesity Research, 13,170-178. doi:10.1038/oby.2005.22

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[6] Tsai, H.J. and Tsai, A.C. (2012) Prevalence of metabolic syndrome in elderly taiwanese: Results from the nutrition and health survey in Taiwan (1999-2000). http://apha.confex.com/apha/135am/techprogram/paper_150632.htm.

[7] Yao, C.A., Lee, L.T., Chen, C.Y. and Huang, K.C. (2005) The study of metabolic syndrome in elderly receiving health check-up. Taiwan Geriatrics & Gerontology, 1, 18- 25.

[8] Ruderman, N.B., Schneider, S.H. and Berchtold, P. (1981) The "metabolically-obese", normal-weight individual. American Journal of Clinical Nutrition, 34, 1617-1621.

[9] St-Onge, M.P., Janssen, I. and Heymsfield, S.B. (2004) Metabolic syndrome in normal-weight Americans: New definition of the metabolically obese, normal-weight individual. Diabetes Care, 27, 2222-2228.

[10] Wildman, R.P., Muntner, P., Reynolds, K., McGinn., A.P, Rajpathak, S. and Wylie-Rosett, J., et al. (2008) The obese without cardiometabolic risk factor clustering and the normal weight with cardiometabolic risk factor clustering: Prevalence and correlates of 2 phenotypes among the US population (NHANES 1999-2004). Archives International Medicine, 168, 1617-1624. doi:10.1001/archinte.168.15.1617

[11] Tsai, C.H. (2009) Metabolic syndrome in non-obese Taiwanese: New definition of metabolically obese, normal- weight individual. Chinese Medical Journal, 122, 2534- 2539.

[12] Bureau of Health Promotion Database (2012) The criteria of metabolic syndrome. http://www.bhp.doh.gov.tw/BHPnet/Portal/Them_Show.aspx?Subject=201109290001&Class=2&No=201111010004.

[13] Department of Health (2003) Identification, evaluation, and treatment of overweight and obesity in adults in Taiwan. Department of Health, Taiwan.

[14] Department of Health, Executive Yuan (2002) The Public health impact of obesity. http://www.doh.gov.tw/NewVersion/content.

[15] Hwang, L.C., Bai, C.H. and Chen, C.J. (2006) Prevalence of obesity and metabolic syndrome in Taiwan. Journal of Formosa Medicine Association, 105, 626-635.

[16] Bureau of Health Promotion, Department of Health (2012) The method of measuring waist circumference of adult. http://www.bhp.doh.gov.tw/bhpnet/portal/Them_Show.aspx?Subject=200712250011&Class=2&No=200712250144.

[17] Schurgin, S. and Siegel, R.D. (2003) Pharmacotherapy of obesity: An update. Nutrion Clinical Care, 6, 27-37.