

Effect of age, degree and distribution of adiposity on the prevalence of the metabolic syndrome in a cohort of obese Italian women

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The classification system based on five factors with cut-offs defined by the recent International Diabetes Federation consensus was used to estimate the prevalence of the metabolic syndrome in a cohort of 570 obese Italian women (age: 18–83 years; body mass index (BMI): 30.2–66.7 kg/m²). A binary logistic regression analysis model assessed the combined impact of age, BMI, waist circumference (WC) and waist-to-hip ratio (WHR) on such prevalence. The overall prevalence of the syndrome among these obese women was 58.6%. The multivariate binary logistic regression analysis revealed that the prevalence progressively increased with age ($p<0.001$) attaining an adjusted odd ratio (AOR) of 3.77 in the oldest group, in reference to the younger group, and was significantly higher in women with larger WC (AOR=2.03; $p<0.001$), and in those with higher WHR (AOR=1.72; $p=0.017$). In contrast, BMI had no significant effect on the prevalence (AOR=0.84; $p=0.441$). Among women having the metabolic syndrome, 54.5% had three abnormalities, the prevalent combination (38.5%) being abdominal obesity, low HDL-cholesterol and high blood pressure; four abnormalities were found in 32.0%, displaying in the major part (34.6%) the same above factors plus raised triglycerides, while the remaining 13.5% of affected women had all the five abnormalities. These results indicate a high prevalence of the metabolic syndrome among obese Italian women, although the degree of obesity does not appear to have a significant contributory role *per se*, unlike the absolute and relative amount of abdominal adiposity, which proved to be independent determinants of the metabolic syndrome, along with advancing age. Considerable variations in number and combinations of abnormalities entailed in the metabolic syndrome indicate that further investigation may possibly identify groups of obese patients at higher risk for targeted intervention.

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