

## **The age-dependent increase of metabolic syndrome requires more extensive and aggressive non-pharmacological and pharmacological interventions: a cross-sectional study in an Italian cohort of obese women.**

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**Background:** metabolic syndrome is a combination of cardiovascular risk factors (i.e., visceral obesity, dyslipidaemia, glucose intolerance, and hypertension), which entails critical issues in terms of medical management and public health.

**Methods:** the aim of the present cross-sectional study was to investigate the age-related changes of the single IDF (International Diabetes Federation) diagnostic criteria for metabolic syndrome (waist circumference, WC; high-density lipoprotein cholesterol, HDL-C; triglycerides; glucose; systolic and diastolic blood pressure, SBP and DBP) in a large population of (Italian) obese women ( $n = 1.000$ ; body mass index, BMI  $>30$  kg/m<sup>2</sup>; age: 18-83 yrs), subdivided into two subgroups depending on the presence ( $n = 630$ ) or absence ( $n = 370$ ) of metabolic syndrome. Parallely, the percentages of treatment with hypolipidaemic drugs, hypoglycaemics, and antihypertensives and, among the treated subjects, of control of the underlying condition in accordance with the cut-offs of IDF criteria for dyslipidaemia, hyperglycaemia, and hypertension were determined over six age ranges (i.e., 18-30, 31-40, 41-50, 51-60, 61-70, and  $> 70$  yrs).

**Results:** the prevalence of metabolic syndrome increased with advancing age. In the subgroup with metabolic syndrome, an age-dependent increase in HDL-C, glycaemia, and SBP occurred, while the visceral adiposity was stable. In the same subgroup, triglycerides and DBP decreased age-dependently. In the subgroup without metabolic syndrome, an age-dependent increase in WC, HDL-C, glycaemia, SBP, and DBP was observed. A progressive age-dependent increase in the percentage of patients pharmacologically treated for the cardiometabolic abnormalities was detected in patients with metabolic syndrome, a similar trend being also observed in patients without metabolic syndrome only for the antihypertensives. A clear-cut disproportion between treated versus adequately controlled women (with pharmacotherapy) was detected in the whole population.

**Conclusions:** at least in an Italian context of obese females, the age-dependent worsening of glycaemia and BP exerts a fundamental pathophysiological role in the progressive increase of metabolic syndrome with advancing age, which appears to be not adequately treated in a large part of obese subjects. The results of the present study might be useful for public health decision makers for programming future more extensive and aggressive non-pharmacological and pharmacological interventions in the obese population.

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