

## Editorial Comment

# The Prevalence of the Metabolic Syndrome is High in Balkan Countries

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**I**n their research paper in this issue Costel Matei and colleagues from the Institute of Cardiovascular Disease in Romania studied all patients admitted to 12 cardiology departments of county hospitals (pilot study) and 1176 patients in 15 cardiology departments.<sup>1</sup> The main goal of this research was to evaluate factors associated with the metabolic syndrome (MetS) in Romania, using the definition criteria of the National Cholesterol Education Program Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (NCEP ATP-III) as well as those of the International Diabetes Federation (IDF). The authors observed that the prevalence of MetS in the pilot study involving 1326 patients (53.4% men), where only the NCEP ATP-III criteria were used, was 42.8% (45.9% in men and 39.4% in women,  $p=0.01$ ). However, in the main study, which included 1176 patients (49.7% men), the prevalence of MetS according to the NCEP ATP-III and the IDF criteria was 40.6% (38.3% in men and 42.3% in women) and 44.2% (43.1% in men and 45.3% in women), respectively. Moreover, the MetS represented a risk factor only for stable angina, with no gender difference. Based on their findings the authors observed that the prevalence of MetS was high in their population, while both definitions showed a slightly higher prevalence of MetS in women compared to men.

Other investigators in a Balkan country

(i.e. Greece) have also studied the MetS,<sup>2-4</sup> and showed that the prevalence of this condition was high, but not as high as the figures reported by Matei and colleagues. In particular, in the ATTICA Study the prevalence of the MetS was 17.9% according to the NCEP definition and 48.9% according to the IDF definition, while the prevalence was higher in men than in women according to both definitions ( $p<0.001$  for gender differences). Moreover, 3.9% of the ATTICA study's sample satisfied only the NCEP criteria, but not the IDF, whereas 38.6% satisfied only the IDF criteria.<sup>8</sup> The MetS-Greece Collaborative Group<sup>3</sup> observed similar rates regarding the prevalence of the MetS in Northern Greece. In addition, the ATTICA study investigators observed that greater adherence to the Mediterranean diet and moderate to high physical activity levels may assist in preventing the development of the MetS, by modifying its components.<sup>4,9</sup>

The MetS is a collection of conditions associated with metabolic disorder and an increased risk of developing cardiovascular disease. Conditions such as dyslipidaemia, high blood pressure, impaired glucose tolerance and abdominal fat accumulation fall into this category.<sup>10</sup> Lifestyle approaches to treating and preventing the MetS vary, but almost all experts agree that parameters involved in the syndrome are greatly improved by reducing body weight and increasing the level of physical activi-

ty.<sup>11,12</sup> A few years ago, Roberts et al<sup>11</sup> and Stone et al<sup>12</sup> suggested that lifestyle modifications mitigated cardiovascular disease progression and reversed existing disease. Small changes can lead to great improvements, not for achieving a perfect lifestyle but for working towards a better and healthier one. However, it should be noted that although lifestyle changes can provide many benefits for human health, and especially for the management of the MetS, sometimes these changes are difficult to implement and maintain. Therefore, drug treatment including statins, angiotensin converting enzyme inhibitors, angiotensin-II receptor blockers, and oral anti-diabetic agents can be considered.

The MetS seems to be an emerging epidemic that affects roughly one out of three or four persons in Balkan countries. Preventive measures are not difficult to determine: eat less, and exercise more. These solutions must become part of everyday life and be woven into the social structure in order to be effective. Health care professionals, and society as a whole, need to acquire a profound consciousness of the relevance for health of lifestyle factors such as nutrition and activity.

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