Increased cardiovascular risk using atherogenic index measurement among healthcare workers

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Background & Aim: Cardiovascular diseases are one of the leading causes of death worldwide. This burden of disease is particularly high among healthcare workers. The aim of the study was to identify determinants that increase atherogenic index among healthcare workers.

Methods: In 1,678 healthcare workers, cardiovascular risk factors were analyzed: Body mass index, waist-to-hip ratio, systolic and diastolic blood pressure, glucose, total cholesterol, HDL cholesterol, LDL cholesterol, and triglycerides. Atherogenic index was calculated and determinants were identified.

Results: Mean (SD) age was 41.2 (8.4) years; body mass index 28.4 (4.8); waist-hip-ratio 0.88 (0.07); glucose 96.6 (22.2) mg/dL; TC 195.3 (50.3) mg/dL; HDL 49.0 (16.3) mg/dL; LDL 112.7 (35.0) mg/dL; triglycerides 171.7 (121.2) mg/dL; and atherogenic index 3.3 (1.5). Overweight and obesity prevalence was 77.2%. In the multiple linear regression model, the coefficients for AI were being a physician $\beta = 0.381$, male gender $\beta = 0.443$, BMI $\beta = 0.35$, waist-to-hip ratio $\beta = 2.15$, age $\beta = 0.014$, and triglycerides $\beta = 0.915$.

Conclusions: The main contributors to atherogenic index increase were male sex, increased age, waist-to-hip ratio increase, overweight and obesity, high triglyceride levels and working as a physician. Although waist-to-hip ratio was the most powerful determinant, the physician occupational category added risk factors such as stress and adverse psychosocial working conditions, which may potentiate cardiovascular diseases.

Biography
Luis Cuauhtémoc Haro-García has obtained his MSc and PhD degrees at the National Autonomous University of Mexico (UNAM). He is a Researcher member at the Occupational Health Research Unit at the Medical Center “Siglo XXI” of the Social Security Mexican Institute (IMSS) and Occupational Health Professor at the Public Health Department, Faculty of Medicine, UNAM. He is also a Professor at the Health Promotion Department, Universidad Autónoma de la Ciudad de México (UACM). He has published more than 30 papers in national and international indexed journals.

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