Gac Sanit. 2025;39(S2):527

Gaceta Sanitaria

https://www.gacetasanitaria.org

851 - BODY ROUNDNESS INDEX AND MORTALITY: THE SEGUIMIENTO UNIVERSIDAD DE NAVARRA PROSPECTIVE COHORT

L.J. Domínguez, C. Sayón-Orea, M. Bes-Rastrollo, E. Toledo, M. Barbagallo, M.A. Martínez-González

Department of Medicine, University Kore of Enna; Geriatric Unit, Department of Internal Medicine and Geriatrics, University of Palermo; University of Navarra, Department of Preventive Medicine and Public Health-IdiSNA; CIBER Fisiopatología de la Obesidad y Nutrición (CIBERobn), Instituto de Salud Carlos III; Public Health Institute Navarra; Department of Nutrition, Harvard T.H. Chan School of Public Health.

Resumen

Background/Objectives: Obesity represents a global pandemic and a major risk factor for the development of chronic disease and increased mortality. Common methods used to define obesity, such as body mass index (BMI), do not accurately reflect body fat content or distribution. Body roundness index (BRI) is an anthropometric measure based on elliptical models of body shape, that uses eccentricity to estimate visceral fat and total body fat percentages that uses waist circumference and height, to provide a comprehensive reflection of visceral fat distribution. We investigated the prognostic capacity of the recently proposed BRI on incident death.

Methods: We included 12,642 participants (60.2% women, mean age: 39, SD: 12 years) from the "Seguimiento Universidad de Navarra" prospective cohort. Participants were monitored through biennial questionnaires. Multivariate cox regression analyses were used to estimated the association between quartiles of BRI and total mortality.

Results: The mean BRI was 3.6 (SD: 1.4) units. Over a median follow-up period of 11.5 years, 380 participants died. In multivariable-adjusted Cox models, higher quartiles of BRI were significantly associated with all-cause mortality among participants aged #1 60 years, with Hazard Ratio (HR) = 1.64; 95% confidence interval (CI), 1.00, 2.70 for the comparison of extreme quartiles. Each 2-unit increase in BRI was linked to a 21% higher all-cause mortality risk in both men and women (HR = 1.21; 95%CI: 1.03-1.43). This result was even greater for participants aged over 60 years (multivariate adjusted HR for 2-unit BRI increase: 1.31; 95%CI: 1.00, 1.72) while it was not significant for those under 60 years.

Conclusions/Recommendations: In conclusion, BRI, a simple equation applicable in any clinical setting, was linearly predictive of all-cause mortality in initially healthy subjects aged 60 years or older. Low levels of central adiposity seem a key factor to reduce mortality.

Financiación: GN2023/19 y PI24/01723.

0213-9111 © 2025 SESPAS. Publicado por Elsevier España, S.L.U. Todos los derechos reservados