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ASSOCIATION OF TRAJECTORY OF BODY SHAPE INDEX WITH ALL-CAUSE AND CAUSE-SPECIFIC MORTALITY: RESULTS FROM TEHRAN LIPID AND GLUCOSE STUDY (TLGS)

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OBJECTIVES

The aim of the current study was to examine how the trajectory of body shape, assessed through a body shape index (ABSI), could predict mortality in a prospective cohort of the Tehran Lipid and Glucose Study (TLGS) over a 20-year period.

METHODOLOGY

The study included 5587 participants greater than 35 years old from the TLGS who were free of cardiovascular disease and cancer at baseline and completed the initial assessment and at least one additional follow-up examination. ABSI trajectories were developed in 6 phases over 18 years of follow-up from 2000 to 2018 using GMM. The primary outcomes were overall and cause-specific mortality, including death from cardiovascular disease (CVD), non-CVD causes, and non-cancer causes. Cardiovascular events were also considered secondary outcomes.

RESULTS

During a mean follow-up of 15.8 years, 566 (20.68 %), and 178 (6.56 %) deaths from all-cause and CVD mortality were identified, respectively. The small ABSI - marked increase (TR2) (adjusted HR, 1.36; 95%CI, 1.04-1.79) and large ABSI - marked increase trajectory (TR3) (adjusted HR, 1.41; 95% CI, 1.04-1.91) were associated with higher subsequent risks of all - cause mortality and non-CVD mortality (adjusted HR for TR2, 1.38; 95% CI, 1.00-1.91; adjusted HR for TR3, 1.43; 95% CI, 1.00-2.05) as well as an increased risk for CVD (adjusted HR for TR2, 1.40; 95% CI, 1.14-1.71; adjusted HR for TR3, 1.42; 95% CI, 1.13-1.78) and CHD (adjusted HR for TR2, 1.53; 95% CI, 1.19-1.97; adjusted HR for TR3, 1.48; 95% CI, 1.12-1.96).

CONCLUSION

ABSI trajectories may be associated with subsequent risk of mortality and CVD events.