The Mediterranean Diet Protects the Renal Function in Older Adults: A Prospective Cohort Study

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Objectives: It is not clear if the adherence to a Mediterranean diet is associated with changes in kidney function. The aim of this study is to assess the prospective association between the adherence to the Mediterranean diet and renal function decline.

Methods: Prospective cohort study of 975 community-dwelling individuals aged 60 and older who were recruited during 2008–10 in Spain, and followed up to December, 2015. At baseline, food consumption was obtained with a validated, computerized face-to-face diet history. The “a priori” adherence to the Mediterranean diet was assessed with the Mediterranean Diet Adherence Screener (MEDAS score: low adherence 0–5 points, moderate adherence 6–8 points, high adherence 9–14 points). To identify “a posteriori” dietary patterns, 880 foods were categorized into 36 different groups according to similarities in their nutritional profile. Factor analysis (principal components analysis) was applied to generate independent dietary patterns. At baseline and at the end of follow-up, serum creatinine (SC) and glomerular filtration rate (GFR) levels were ascertained and changes were calculated. Two end-points were considered: SC increase and GFR decrease beyond that expected for age. Logistic regression models were built and adjusted for prevalent and incident cardiovascular risk factors.

Results: At the end of follow-up 150 cases of SC increase and 146 cases of GFR decrease occurred. The fully adjusted ORs (95% CI) of SC increase were 0.75 (0.49–1.15) for participants with a moderate adherence to the MEDAS score, and 0.58 (0.36–0.95) for those with a high adherence, when comparing to participants with a low adherence; (p-trend: 0.026). Results for GFR decrease had the same direction (p-trend: 0.049). The fully adjusted ORs (95% CI) of SC increase according to increasing quartiles of adherence to an “a posteriori” Mediterranean-like dietary pattern were 1.00, 0.62 (0.37–1.03), 0.57 (0.33–0.99), and 0.46 (0.24–0.86); (p-trend: 0.017). Results for GFR decrease were similar (p-trend: 0.007).

Conclusions: A higher adherence to a Mediterranean dietary pattern was associated with a lower risk of kidney function decline.

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