P23-013-23 Associations Among Plasma Expression of miRNA-486, Fruits Intake and Low-Grade Systemic Inflammation in Older Adults From a Population-Based Study

Gabrielli Carvalho[1], Paula Brandão-Lima[1], Regina Fisberg[1], Tanyara Payolla[1], Marcelo Rogero[1], Flávia Sarti[2]

[1]*School of Public Health, University of São Paulo*
[2]*School of Arts, Sciences and Humanities, University of São Paulo*

Objectives: To evaluate the plasma expression of miRNA-486 and the intake of fruits according to the systemic low-grade inflammation score (SIS), and assess their associations with inflammatory biomarkers in older adults participating in ISA-Nutrition 2015.

Methods: This cross-sectional study used data from 193 older adults (69.1 ± 0.5 years; 50.4% female) participating in ISA-Nutrition 2015. Individuals with acute inflammatory diseases or using medication that could influence the results were excluded. The miRNA-486 was quantified by qRT-PCR. Plasma concentrations of inflammatory biomarkers were determined from a multiplex immunoassay kit or ELISA technique. The SIS was calculated from plasmatic concentrations of 10 inflammatory biomarkers. Fruit intake was evaluated according to the usual consumption of individuals. The adjusted Wald test was used to compare variables of interest according to tertiles of SIS, with individuals in the 3rd tertile having the highest scores in SIS, while those in the 1st tertile had the lowest scores. Kendall's tau-a was used to estimate correlation between plasma miRNA expression and variables of interest. Analyses were performed using Stata/SE software, version 17.0 with a significance level of 0.05.

Results: A total of 45.1% of participants were overweight/obese and 64.7% of them had metabolic syndrome. Plasma expression of miR-486 was lower in 3rd tertile (more inflammatory) when compared to 1st tertile (less inflammatory). The intake of fruits was higher in 1st tertile than in 2nd tertile (intermediate inflammatory). Moreover, the plasma expression of miRNA-486 was inversely correlated to plasma TNF-α (−0.111; $p = 0.035$) and leptin (−0.158; $p = 0.003$) concentrations. Lastly, plasma expression of miRNA-486 was inversely correlated to the intake of fruits (−0.104; 0.040).

Conclusions: Plasma expression of miRNA-486 varied according to the degree of systemic low-grade inflammation of older adults. Moreover, the plasma expression of miRNA-486 was associated with fruits intake, highlighting that dietary factors can modulate the expression of miRNA.

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P23-014-23 Older Adults' Dietary Intake in the UK: A Secondary Analysis of National Survey Data

Andrea Cereceres Aragon[1], Mel Holmes[1], Hannah Ensaff[1]

[1]*University of Leeds*

Objectives: Worldwide, the population of older adults is increasing. This presents challenges to health and social care systems, making it essential to understand the nutritional status of this population group. This study's aim was to examine older adults' food and nutrient intake and compare against government recommendations.

Methods: The National Diet and Nutrition Survey (NDNS) collects data on food and dietary intake of the UK's population. A secondary analysis of NDNS data from 2016–2019, for older adults (≥65 years, $n = 452$) was undertaken. For the analyses, older adults were divided into two groups, 65–74 and ≥75 years. Dietary intake was compared with government guidelines using one sample t-test. Comparison between two age groups was conducted using independent t-tests.

Results: Both groups (65–74 and >75 years) consumed ≤5 portions/day of fruits and vegetables (4.5 and 3.9 portions, respectively), ≤140 g/week of oily fish (90.9 g and 79.5 g, respectively). Red meat intake was within the recommendation of ≤70 g/day (52.7 g and 48.1 g, respectively). The recommendation for free sugars (≤5% total dietary energy intake, TEI) was exceeded (9.0% and 10.2% TEI, respectively), and intake of saturated fatty acids (12.8% and 14.1% TEI, respectively) was surpassed (≤11% TEI). Fibre intake (19.7 g and 17.3 g, respectively) did not meet recommendations (30 g/day).

Conclusions: Older adults' dietary intake did not meet certain recommendations, including free sugars, saturated fatty acids, fibre, selenium, and potassium. Further work is required to understand intakes and consider the diet quality within this population group.

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P23-015-23 Differences in HDL-Related Coronary Heart Disease Risk Between Individuals With and Without Diabetes: A Prospective Cohort Study

Junxiang Chen[1], Qi Lu[1], Gang Liu[1], An Pan[1]

[1]*Huazhong University of Science and Technology School of Public Health*

Objectives: High-density lipoprotein (HDL) could lose its atheroprotective functions (e.g., reverse cholesterol transport, anti-inflammation) in the presence of diabetes. This study sought to examine associations of HDL cholesterol (HDL-C) and HDL particle (HDL-P) subclasses with coronary heart disease (CHD) risk in individuals with and without diabetes.

Methods: This study included 393 516 participants (20 691 diabetes and 372 825 non-diabetes) with HDL-C measurements from the UK Biobank, among whom 108 071 (5730 diabetes and 102 341 non-diabetes) had HDL-P subclasses measurements. Restricted cubic splines cooperated with Cox model were used to estimate associations of HDL with CHD.

Results: Concentrations of HDL-C and HDL-P subclasses in individuals with diabetes were lower than those in individuals without diabetes ($P < 0.001$). During a median follow-up of 13.0 years, 3398 (16.4%) and 24 772 (6.6%) incident CHD events were identified for those with and without diabetes, respectively. The association between HDL-C and CHD was L-shape for individuals without diabetes, whereas U-shape for patients with diabetes (P for interaction between HDL-C and diabetes <