NUTRITIONAL STATUS OF ELDERLY PATIENTS VISITING THE GERIATRIC CLINIC—RESULTS FROM NORTH INDIA

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Malnutrition is a major concern among the elderly population. The Mini-Nutritional Assessment is a validated scale for determining elderly malnutrition. A study was conducted to determine the prevalence of malnutrition among elderly patients visiting the geriatric out-patient services of a tertiary care center in north India and analyze various attributes.

225 elderly (≥ 60 yrs) randomly selected patients (M = 154, mean age 67.42 ± 13.82 yrs; F = 71, mean age 64.69 ± 10.51 yrs) were assessed using the MNA questionnaire. Information regarding chronic illnesses for 145 patients (M = 97, F = 48) was entered into a pre-designed case report form. The data was analyzed using SPSS ver 16.0. Mean BMI was 22.58 ± 8.55 kg/m^2 (M) and 23.76 ± 10.79 kg/m^2 (F) (p=0.084). 180 patients scored ≤ 11 points on screening test and full assessment was completed on them only. Among the 180 patients (M = 117, F = 63), 73 were classified as malnourished (< 17 total score) and 107 were at risk of malnutrition (17–23.5 total score). 36% males undergoing full assessment were malnourished as compared to 49% females (p =0.083). 100% patients lived independently or with families. 92.8% patients were taking > 3 prescription drugs daily. 68% patients were unaware of their weight loss patterns. Whereas fruit/ vegetable consumption was adequate among most (84%) patients, 83% had intermediate protein consumption and as many as 71% had inadequate fluid intake. 50 out of 145 evaluated patients had at least 2 chronic co-morbidities. Hypertension was the commonest co-morbidity (40.7%) followed by T2DM (23.4%).

A high prevalence of malnutrition in the Indian elderly visiting hospitals was demonstrated. The average BMI was found to be in the normal range. Prescription drug use was quite common in the elderly. Whereas fruit/ vegetable consumption was adequate, fluid intake fell short.

The study highlighted important aspects of elderly nutrition in north India.

AGE-DEPENDENT INCREASE IN ENDOTHELIAL MICROPARTICLES IN HEALTHY SUBJECTS: IMPACT OF COCOA FLAVANOLS

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Background: Clinical studies show that cocoa flavanols (CF) can decrease vascular stiffness and blood pressure and improve endothelial function even in healthy elderly subjects. We investigated whether age-dependent changes in circulating endothelial microparticles (EMPs) exist, whether these correlate with age-dependent vascular changes, and whether a CF-intervention also affects EMPs.

Methods: EMPs were determined in 52 healthy subjects (22-75years) by flow cytometry. Endothelial function (flow-mediated-vasodilation; FMD), blood pressure, and wall-shear-stress (WSS) were measured. Using pulse-wave-analysis, pulse wave velocity (PWV) and aortic augmentation index (AIX) were measured. 22 young (<35yrs) and 20 elderly (50-80yrs) non-smoking healthy male consumed either CF-containing-drink [450mg] or nutrient-matched, CF-free-control BID for 14 days. Measurements were taken after overnight fasting before and 1h after the first drink on day 1 and day 14.

Results: With increasing age, CD62e$^+$ but not CD31$^+$/41$^-$ and CD144$^+$-EMPs, increased. Significant correlations were found between age and systolic blood pressure (SBP) and AIX. In elderly subjects, we observed an increased BA diameter and hence reduced WSS and FMD. CD62e$^+$ correlated with SBP and inversely with FMD. Following 2 weeks of daily CF intake, FMD and PWV improved in young and elderly individuals. CF decreased AIX and thus SBP in elderly. CD62e$^+$ and CD31$^+$/41$^-$-MPs but not CD144$^+$ significantly decreased in both groups. The decrease in CD62e$^+$ correlated with decreases in SBP, AIX, and inversely with FMD improvements.

Conclusion: In healthy humans, cardiovascular aging is associated with EMPs indicative of endothelial injury and can be modulated by dietary CFs along with improvements in vascular function.

INADEQUATE HYDRATION STATUS AND OVERWEIGHT AMONG OLDER ADULTS: DATA FROM NUTRITION UP 65

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Data on the association between hydration status and overweight in the elderly is scarce. Therefore, the objectives of this study were to evaluate the hydration status in a representative sample of Portuguese older adults and to assess the association between inadequate hydration and overweight (including obesity).

A cluster sampling approach was used, representing Portuguese older adults (≥65 years) according to age, sex, education level and regional area within the Nutrition UP 65 study. This cross-sectional evaluation was conducted in 2015 and 2016. From a sample size of 1500 participants, 1312 were eligible for the present analysis, 57.3% were women and 23.5% were aged ≥80 years. Inadequate hydration was defined as one 24h urine osmolality >500 mOsm/kg. Overweight group includes also the obese and was defined as BMI>27 kg/m^2, according to the Nutrition Screening Initiative criteria for older adults. A multivariable binary logistic regression model was conducted to evaluate the association between hydration status and overweight/obesity. Odds Ratios (OR) and respective 95% Confidence Intervals (95%CI) were calculated.

Inadequate hydration was observed in 37.5% participants and 69.6% were overweight or obese. After adjusting for potential confounders, inadequate hydration (OR=1.52, 95%CI: 1.17–1.98) was associated with overweight/obesity.

These results highlight the need for implementing nutritional strategies towards the improvement of hydration status in this age group, and particularly in the overweight or obese.