Topic 09 – Prevention / Epidemiology / Nutrition

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Consumption of milk is associated with a reduced risk of mortality in middle-aged men

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Relationships between dairy products and cardiovascular risk are debated. On the one hand, saturated fats contained in dairy products have a deleterious impact on lipids. On the other hand, dietary calcium has been shown to lower blood pressure and to be associated with a reduced occurrence of metabolic syndrome and obesity.

Aim: To investigate the link between dairy product intake and all-cause death in a cohort followed over 12 years.

Methods: A sample of 947 men aged 45-64 was randomly selected in 1995-96 from the general population of Lille, Strasbourg and Toulouse areas. Each participant completed a 3-day food record, checked by a dietician. Vital status was obtained on December 31, 2009.

Results: Median follow-up was 13.8 years. Cumulative incidence of death reached 13.3%, with a significant north-south gradient (21.4% in Lille, 10.2% in Strasbourg, and 7.4% in Toulouse). People who died were significantly older, had less often graduated from high school, were preferentially farmers, employees or workers, less often liable to income tax, and more often heavy smokers or sedentary people. They consumed a lower amount of vegetable proteins, polysaccharides, polyunsaturated fats, linoleic acid, milk and dairy products, but a higher amount of alcohol. Compared to people who did not drink milk, the relative risk of death was 0.64 [(95% CI: 0.42-0.98); p=0.038] in those consuming up to one glass per day (250 ml) and 0.45 [(0.22-0.94); p=0.032] for more than one glass, after adjustment for centre, age, high school completion, job category, liability for income tax, severe chronic disease, Framingham risk score, alcohol intake, smoking, physical activity, food quality index, and calorie intake. Other dairy products were not significantly associated with death.

Conclusion: Drinking milk is associated with a reduced risk of all-cause death, independently of main confounders such as age, poor diet quality or health conditions, and educational and socio-economic status.

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Probability of significant coronary artery disease in Southern France: a need for distinctive predictive models

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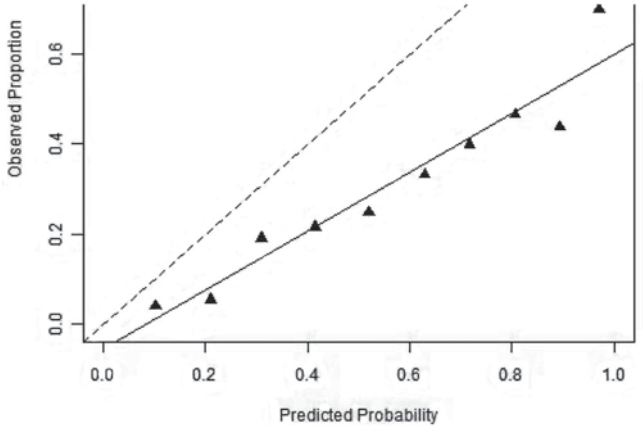
Background: Likelihood of coronary artery disease (CAD) is based on predictive models that have been developed in early 70's in North America. It's unknown whether those models are accurate in European populations.

Methods: In two regional centers recruiting urban and peri-urban Southern French population, patients with suspected CAD were prospectively referred to Coronary Computed Tomography (CCT) with a 64-slice scan. Inclusion criteria were 1 – clinically suspected angina pectoris or 2 – suspected silent ischemia on resting EKG. Significant CAD was defined as at least one coronary artery with lumen stenosis >50% by CCT. Likelihood of significant CAD was estimated using the Duke Model. Predictive quality of the model was assessed: reliability by comparing the predicted likelihood with the observed proportion of CAD, and discrimination by comparing the distribution of likelihood of significant CAD according to the CAD status and estimating the c-index of the model. Coefficients associated to the predictive characteristics presented in the Duke Model were estimated among the included patients.

Results: Out of 824 patients, CCT imaging was adequate in 737 and significant CAD was detected in 227 patients (31%). Observed proportion of patients with significant CAD was lower than the predicted probability (mainly explained by the change in the expected slope, Graph). Mean predicted likelihood of significant CAD was 0.48±0.27 and 0.72±0.22 among patients without and with significant CAD, respectively (p<0.0001). The c-index was equal to 0.75 (95% CI, 071 to 0.78). Estimates of coefficients of the characteristics presented in the Duke model varied substantially among our patients.

Conclusions: The assessment of the quality of predictions of the Duke model for significant CAD showed an imperfect reliability in our study population. Specific predictive models are needed to estimate likelihood of CAD in Southern France.



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Adiponectin and long term mortality in coronary heart disease patients according to the severity of the disease

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Background: Adiponectin is an hormone secreted by the adipose tissue that is implied in the regulation of glucose and fatty acids metabolism. We aimed to investigate in French men with CHD whether plasma adiponectin levels are associated with long-term mortality, considering varying degrees of CHD severity.

Methods: Among 834 consecutive men (45-74 years) hospitalized for CHD between 2001 and 2004, total plasma adiponectin measured by ELISA and markers of CHD severity (Gensini and Jeopardy scores, resting heart rate (RHR) and left ventricular dysfunction (LVEF)) were assessed in 736 patients