

Associations of environmental risk factors with risk of coronary artery disease in Tlemcen (Algeria)

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Abstract :

PURPOSE: In the purpose of studying the effect of the environmental factors on risk of coronary artery disease, we established a case-control study in Tlemcen.

METHOD AND RESULTS: A sample of 568 men and women aged 25 to 64 years, was studied; 170 had had myocardial infarction or angina and 398 controls. Variables associated with CAD were age, sex, tobacco consumption, hypertension, diabetes, obesity, family history of cardiovascular disease, total cholesterol, triglycerides, HDL-cholesterol and LDL-cholesterol. Adjusted odds-ratio and their 95 % CIs were calculated by logistic regression. Hypertension (OR=2.48 [1.68; 3.67]), diabetes (OR=2.86 [1.89; 4.34]), obesity (OR=1.21 [0.76; 1.92]), family history of cardiovascular disease (OR=3.49 [1.39; 8.73]), total cholesterol (OR=0.99 [0.51; 1.92]), triglycerides levels (OR=1.76 [0.93; 3.35]), HDL-cholesterol (OR=2.48 [1.69; 3.66]) and LDL-cholesterol (OR=1.09 [0.59; 2.01]). The variables differing most significantly and independently between cases and controls were identified by stepwise logistic regression analysis ($p < 0.05$), variables concerned hypertension and diabetes ($p < 0.0001$), decrease HDL-cholesterol ($p = 0.0002$) and tobacco consumption ($p = 0.005$), with stronger associations in cases than in controls.

CONCLUSION: It is concluded that hypertension and diabetes, decrease HDL-cholesterol in both sexes, an increase in concentration of triglyceride only in women and tobacco consumption in men, were significantly related to coronary artery disease in Tlemcen.

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