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C-reactive protein and interleukin-18 levels in relation to coronary heart disease: prospective cohort study from Busselton Western Australia.

Hung J, Knuiman MW, Divitini ML, Langton PE, Chapman CL, Beilby JP.

Source

School of Medicine & Pharmacology, Sir Charles Gairdner Hospital Unit, University of Western Australia, Nedlands, Western Australia, Australia. jhung@cyllene.uwa.edu.au

Abstract

BACKGROUND: Elevated levels of inflammatory markers are associated with incident coronary heart disease (CHD), but it remains controversial whether these markers provide incremental predictive value to conventional risk factors. We investigated the relationship between C-reactive protein (CRP) and interleukin-18 (IL-18) levels and risk of CHD in men and women without initial cardiovascular disease.

METHODS: A prospective case-cohort design over the period 1981-2001 involving 253 incident CHD cases and a random sub-cohort of 441 subjects was used. Cox proportional hazards regression was used to estimate the relative risks (RRs) of CHD for continuous and tertiles of CRP and IL-18 after controlling for conventional risk factors.

RESULTS: The multivariate-adjusted RR of CHD associated with one unit increase in log CRP in the overall population was 1.29 (1.07, 1.55; trend $P=0.008$). Men and women in the top compared to bottom third of CRP distribution had an adjusted RR for CHD of 1.65 (1.03-2.65; $P=0.036$). The multivariate RR for continuous log IL-18 was 1.34 in men, 1.63 in women and 1.36 overall, and none reached statistical significance.

CONCLUSIONS: Baseline CRP but not IL-18 levels are independently predictive of future CHD. However CRP provides only modest additional predictive value over conventional risk factors and the benefit of a prevention strategy based on CRP still needs to be established.

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