Abstract

BACKGROUND: Increased iron stores and haemochromatosis gene mutations may be risk factors for coronary heart disease. The aims of this study were to determine in a stable community population whether increased iron stores or haemochromatosis gene mutations were risk factors for coronary heart disease.

DESIGN: Cross-sectional and prospective cohort studies.

METHODS: We evaluated 1185 men and 1141 women aged 20-79 years of predominantly Anglo-Celtic descent from the 1994-95 assessment of the Busselton population in Western Australia. Subjects underwent haemochromatosis genotyping, serum iron studies, clinical, biochemical and ECG evaluation for coronary heart disease and associated risk factors. Hospital admissions or death from cardiovascular disease were determined by linkage with the Western Australian morbidity and mortality database. The study design was cross-sectional for the 1994-95 cohort comparing coronary heart disease cases with unaffected subjects and unaffected subjects were followed prospectively until December 1998.

RESULTS: Cross-sectional and prospective cohort analyses demonstrated that elevated serum iron parameters or possession of either the C282Y or H63D mutations in the gene were not predictive of increased risk for coronary heart disease in men or women.

CONCLUSIONS: Increased iron stores or haemochromatosis gene mutations are not significant risk factors for coronary heart disease.