GENETIC VARIATION IN THE APO B GENE IN RELATION TO CORONARY HEART DISEASE

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In this study the possible aetiological role of genetic variation at the apo B gene locus for the development of coronary heart disease (CHD) in Sri Lankans was investigated.

Blood samples of 95 males aged 37-65 years confirmed by history and electrocardiographic examination to have CHD and an equal number of age matched controls were analysed. DNA was extracted by a triton X-100 lysis method, digested with restriction enzyme Xbal and Southern blot hybridisation carried out according to standard methods (1). The probe for detecting the Xbal polymorphism was 3.5 kb EcoRl fragment of the apo B gene. The Xbal polymorphism arises from an alteration in the third base of theronine codon 2488 (ACC---ACT and does not change the amino acid sequence.

In the control group polymorphism with Xbal was present an allelic frequency of 0.8 (X1 allele). The frequency of the X1 allele was much higher than that reported for caucasian populations. The frequency of the X1 allele was also significantly higher ($p < 0.05$) in men with CHD than in those without CHD. This is in agreement with Myant et al 1989 who reported a positive association between X1 allele and CHD.

References: 1. Kunkel, L.M., Smith, K.D. Boyer, S.J. et al. Analysis of humaqn Y chromosome-specific reiterated DNA in chromosome variants. Proc. Natl.Acad. Sci. USA.1977;74:1245.
2. Myant N.B., Gallagher. M.Babir, G.R.et al. Restriction fragment length polymorphisms in the apo B gene in relation to coronary heart disease. Atherosclerosis 1989;77:193-201.