

## AI 05 Testosterone and premature coronary artery disease in Sri Lankan men

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Recent studies have shown that low endogenous testosterone in men is associated with coronary artery disease (CAD) and its risk factors such as obesity, hypertension, dyslipidaemia, and diabetes mellitus. However, the relationship between testosterone and the risk of development of premature coronary artery disease has not been well clarified. This study was planned to investigate the association of low total testosterone levels with premature coronary artery disease. Men (n=31) 45 years of age or below with documented coronary artery disease (mean age 41.0±3 yrs) constituted the cases. Control group consisted of 31 men without having clinically evident coronary artery disease (mean age 37.0±4 yrs). Total testosterone, fasting plasma glucose and serum lipid levels were measured, and compared between the two groups. Mean ages of the two groups were significantly different ( $p=0.001$ ). Body mass index ( $p=0.84$ ) and hip circumferences ( $p=0.10$ ) were not significantly different between the two groups, but waist circumference ( $p=0.01$ ) and waist to hip ratio ( $p=0.002$ ) were significantly higher among cases. Prevalence of hypertension, diabetes mellitus, and smoking among cases was higher compared to the controls. Total testosterone levels of cases were significantly lower than those of controls (11.1±3.2 nmol/L vs. 27.1±4.3 nmol/L,  $p=0.001$ ), which remained significant, following adjustment for the clinical covariates (age, BMI, smoking, diabetes mellitus). The plasma glucose ( $p=0.02$ ) and HDL-Cholesterol ( $p=0.001$ ) were significantly different between the groups. The serum total testosterone was significantly lower in patients with premature CAD compared to controls. Low level of total testosterone may be related to the development of premature coronary artery disease.

**Keywords:** premature coronary artery disease; Testosterone.