and as playing a direct role in the pathogenesis of cardiovascular disease. To assess whether polymorphisms in the CRP gene are clinically significant, four polymorphisms were genotyped in 3941 white and five polymorphisms in 700 African–American patients without cardiovascular disease (MI or stroke) at study entry. Patients were then followed up for a median of 13 years; the main outcome measures included the relationships between CRP polymorphisms and baseline carotid intima-media thickness, occurrence of MI and stroke, and cardiovascular disease mortality during follow-up. Two alleles (1919T and 790T) were associated with higher CRP levels in white and black participants, respectively; another (3872A) was associated with lower CRP levels in white and black participants, and one allele (2667C) was associated with lower CRP levels in white participants only. No association was found between carotid intima-media thickness and any CRP gene polymorphism in either population. In white participants, the 1919T allele was associated with increased risk of stroke for TT vs AA (HR 1.4) and for cardiovascular disease mortality (HR 1.40). In black participants, homozygosity for the 790T allele was associated with a fourfold increased risk of MI compared with homozygosity for the 790A allele. The minor alleles of the two polymorphisms associated with lower plasma CRP concentration in white participants (2667C and 3872A) were associated with the decreased risk of mortality from cardiovascular disease. This study shows that genetic polymorphisms in the CRP gene are associated with high and low CRP levels, with particular genotypes being associated with event risks independent of the initial baseline CRP level.

▲ Leslie A Lange, Christopher S Carlson, Lucia A Hindorff, *et al*. Association of Polymorphisms in the *CRP* gene with circulating C-reactive protein levels and cardiovascular events. *JAMA* 2006;**296**:2703–11.

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Reviewers

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IMAGES IN CARDIOLOGY

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Split coronary artery seen with computed tomography and magnetic resonance imaging

A 62-year-old man with onset of atypical angina pectoris was referred to our institution to rule out coronary artery disease. He had no cardiovascular risk factors other than smoking and arterial hypertension. Electrocardiogram and stress electrocardiogram were both negative. We performed non-invasive coronary angiography using both multislice computed tomography and magnetic resonance imaging. Neither examination showed any major coronary stenoses in the left coronary artery system, but a split origin of this coronary artery (fig 1A, B). Both the left anterior descending artery and the left circumflex artery originated from separate but adjacent ostia in the left sinus of Valsalva. This anomaly is the most common coronary artery anomaly, with a prevalence of approximately 0.4%, which causes no haemodynamic impairment and thus, should be considered benign. The absence of major stenoses and the presence of a split left coronary artery were confirmed on conventional coronary angiography, with injections of selective contrast agents into the left anterior descending artery (fig 1C) and the left circumflex artery (fig 1D). Both multislice computed tomography and magnetic resonance imaging have recently been shown to allow non-invasive detection of coronary anomalies. As these images show, both non-invasive methods are of clinical value for assessing proximal coronary anomalies.

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