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Titel des Beitrags:

Genetic variation in the arachidonate 5-lipoxygenase-activating protein (ALOX5AP) is associated with myocardial infarction in the German population.

Abstract:

Genetic variation in the genes ALOX5AP (arachidonate 5-lipoxygenase-activating protein) and LTA4H (leukotriene A4 hydrolase) has previously been shown to contribute to the risk of MI (myocardial infarction) and stroke in Icelandic and Scottish populations. Both genes encode proteins playing a role in the synthesis of the pro-inflammatory leukotriene B mediators, possibly providing a link between MI and inflammation. The aim of the present study was to investigate whether these associations could be confirmed in a large study of German MI patients. Two previously described four SNP (single nucleotide polymorphism) haplotypes of the ALOX5AP gene (termed haplotype A and B) and one SNP (rs2660899) of the LTA4H gene conferring the greatest risk of MI in previous studies were genotyped in 1211 unrelated MI cases from the German MI Family Study and in 1015 healthy married-in spouses serving as controls. Haplotype B in the ALOX5AP gene was associated with an increased risk of MI in the German population, confirming previously reported associations of this haplotype with CAD (coronary artery disease) in populations from Scotland and Italy. No association with the risk of MI was detected for haplotype A of the ALOX5AP gene or for SNP rs2660899

representing the LTA4H gene. In conclusion, haplotype B of the ALOX5AP gene is associated with an increased risk of MI in a large German study. The present study is the third independent report from a European population describing an increased risk of CAD for carriers of haplotype B of the ALOX5AP gene, which substantiates further a role of this gene in the pathogenesis of CAD in Europeans.

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