

Genomic variant in IL-37 confers a significant risk of coronary artery disease

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Abstract

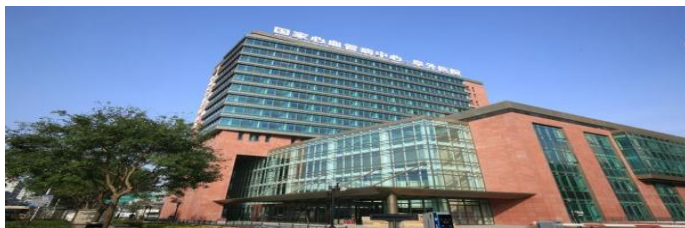
The interleukin 1 family plays an important role in the immune and inflammatory responses. Coronary artery disease (CAD) is a chronic inflammatory disease. However, the genetic association between IL-37, the seventh member of the IL-1 family, and CAD is unknown. Here we show that a single nucleotide polymorphism in the IL-37 gene (rs3811047) confers a significant risk of CAD. We have performed an association analysis between rs3811047 and CAD in two independent populations with 2,501 patients and 3,116 controls from China. Quantitative RT-PCR analysis has been performed to determine if the IL-37 expression level is influenced by rs3811047. We show that the minor allele A of rs3811047 is significantly associated with CAD in two independent populations under a recessive model ($P_{adj}=5.51 \times 10^{-3}/OR=1.56$ in the GeneID Northern population and $P_{adj}=1.23 \times 10^{-3}/OR=1.45$ in the GeneID Central population). The association became more significant in the combined population ($P_{adj}=9.70 \times 10^{-6}/OR=1.47$). Moreover, the association remains significant in a CAD case control population matched for age and sex. Allele A of rs3811047 shows significant association with a decreased mRNA expression level of IL-37 ($n=168$, $P=3.78 \times 10^{-4}$). These data suggest that IL37 is a new susceptibility gene for CAD, which provides a potential target for the prevention and treatment of CAD.

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(<https://healthcare.cardiologymeeting.com/>)



Biography:

Dr. Duraid Al-Midfai considering the cardiovascular major for various reasons. Since I he was a child, he has been fascinated by the world around himself. When he traveled to China and Middle East, the conservation efforts of these two countries interested him and he knew that he wanted to do something related to the CAD disease in Genetics filed. He is currently a member of Fuwai Central China Cardiovascular Hospital As a post doctoral research in the cardio surgery department-in patient building as well as his work also collaborated with Henan Hospital in the Research Center building, which is a Big and famous hospital in central of china for cardiovascular disease treatment.