

4th Global Summit on

HEART DISEASES

March 15-16, 2019 Singapore

Apolipoprotein E polymorphism and circulating high sensitivity C-reactive protein in ACS patients: A cross sectional study in Han Chinese**Abdul Qadir Nawabi' and prof Dai Qi Ming**
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Statement of the Problem: Genetic variations in the APOE gene affect the risk for coronary artery disease (i.e. carriers of the e4 allele have an increased risk). Increased levels of C-Reactive Protein (CRP), an inflammatory marker, correlates with an increased risk of acute coronary events and stroke. They have plenty of studies amongst different ethnicities of the world have demonstrated that Apo E4 has high association with ACS while Apo E2 allele is proactive and as it is known there is positive relationship between C-reactive protein and acute coronary syndrome. However, few studies conducted on the association between Apo4, Apo2 and CRP, have had inverse linkage. So, the aim of our study is to find the relationship of apolipoprotein E polymorphism and circulating C-reactive protein in Han Chinese with acute coronary syndrome.

Method: We studied 200 Han Chinese with acute coronary syndrome confirmed by angiography. TaqMan assays were performed to genotype rs7412 and rs429358, the two variants that determine the APO ε allele ε2, ε3 and ε4. CRP was assayed by high sensitivity method. The association between APOE genotype and hs-CRP was analyzed by comparing ε2 carriers, ε3 homozygotes and ε4 carriers.

Findings: Results showed that the serum hs-CRP AMI and UA groups were significantly higher ($P < 0.01$) and those of the AMI group were significantly higher than those of the UA group ($P < 0.05$). CRP levels varied noticeably in the different apoE gene polymorphism groups ($p < 0.001$). E3/E4 carriers had higher levels of plasma CRP as compared with E2/E3 carriers. In contrast, there was no difference shown in CRP levels between E3/E3 and E2/E3 carriers. Our result is inverse to the result shown by the previous studies.

Conclusion: Our study established that Apo E4 has higher levels of plasma CRP in Chinese Han with acute coronary syndrome, which contrasts with the previous studies, demonstrated as low circulating levels of CRP in ACS patients with Apo E4 allele. Our findings also explain the rational and pathophysiological mechanism that Apoe4 which makes a person susceptible to dyslipidemia, subsequently causing atherosclerotic plaque and augmentation of hs-CRP.

Biography

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