Plasma thrombin-activatable fibrinolysis inhibitor levels and Thr325Ile polymorphism as a risk marker of myocardial infarction in Egyptian patients.

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Source

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Abstract

OBJECTIVE:

The objective of this study was to investigate whether thrombin activatablefibrinolytic inhibitor (TAFI) Thr325Ile polymorphism and TAFI antigen (Ag) levels could constitute a risk marker of myocardial infarction (MI) in Egyptian patients. STUDY POPULATION AND

RESULTS:

The study included forty-six patients with acute MI (mean age 55.7 +/- 8.1 years, 33 men, 13 women) compared with age and sex-matched healthy volunteers (n = 54) as a control group. Clinical examination, laboratory investigations, electrocardiography (ECG) and/or echocardiography were done. TAFI Thr325Ile (reference sequence: rs1926447) polymorphism was genotyped in both studied groups using TaqMan SNP (single nucleotide polymorphism) genotyping assay. The genotypes of the high-risk allele [Thr/Ile (CT) and Ile/Ile (TT)] were significantly more frequent in patients compared with the control group (54.4% and 32.6% vs. 51.8% and 5.6%, respectively) and were also associated with an increased risk of MI [OR = 4.95, (95% CI: 1.80 - 13.63); P = 0.0001]. Ile325 allele carriers were more frequent in cases than in control subjects (60.0% vs. 31.5%) [OR = 3.26, (95%

CI = 1.82 - 5.83), P = 0.001]. The Thr325Ile SNP significantly correlated with TAFI antigen levels with the C/C genotype corresponding with the highest and the T/T genotype with the lowest TAFI antigen levels (P < 0.001). No statistically significant relation was found between TAFI Thr325Ile polymorphism and either the type or the site of MI.

CONCLUSIONS:

TAFI Thr325Ile and its respective plasma protein level could have a contribution to MI risk in the Egyptian population.This could be helpful in refining a risk profile for coronary heart disease (CHD) patients.

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