عنوان مقاله:

Lectin-Like OLR۱ ۳′UTR Rs۱۰۵۰۲۸۶ Gene Polymorphism and Plasma Oxidized-LDL in Coronary Artery Disease and Their Relation to Cardiovascular Risk and Outcomes

محل انتشار:

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خلاصه مقاله:

Background: Oxidized low-density lipoprotein (ox-LDL) has an important role in the genesis of coronary atherosclerosis. Lectin-like ox-LDL receptor ۱ (OLR۱) contributes to the uptake and internalization of ox- LDL. Genetic polymorphisms have been associated with coronary artery disease (CAD). Here we explore the association of plasma levels of ox-LDL and ۳′ UTR OLR۱ (rs۱۰۵۰۲۸۶) SNP with CAD risk and inhospital adverse outcomes. Methods: A case-control study enrolled ۱۹۲ patients with ST-segment elevation myocardial infarction (STEMI), ۱۰۰ patients with unstable angina, and ۱۰۰ healthy controls. Baseline, clinical characteristics, and risk scores of the patients were determined. Plasma ox-LDL and other biochemical variables were measured. All subjects are genotyped for OLR۱ (rs۱۰۵۰۲۸۶) by RT-PCR with TaqMan SNP genotyping assay. Results: Plasma ox-LDL was higher with enhanced sensitivity and specificity in identifying patients with STEMI and was found as a significant independent risk factor for CAD in those two groups. Levels of ox-LDL were increased with increasing poor prognostic factors in STEMI patients that are associated with an increased incidence of some adverse events and in-hospital mortality. Elevated STEMI risk was associated with T allele of OLR۱ (rs۱۰۵۰۲۸۶) (odds ratio of ۴.۹, ۹۵% CI: ۲.۶-۹.۴, p< ۰.۰۰۱). STEMI patients who have T allele exhibited higher risk scores, coronary multivessel narrowing, and elevated incidence of in-hospital major adverse clinical events. Conclusions: These results suggest that plasma ox-LDL, as well as T allele of ORL-۱ (rs۱۰۵۰۲۸۶), is associated with the increased risk for developing STEMI and the associated adverse clinical outcomes.

کلمات کلیدی:
.Coronary artery disease, genotyping, OLR۱, outcomes, Oxidized low-density lipoprotein