Evaluation of myocardial oxidative damage in acute coronary syndrome patients and its correlation with serum IMARs

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View from specialist: It is creative, and of certain scientific and educational value.

[ABSTRACT] Objective: To study the correlation of myocardial oxidative damage in acute coronary syndrome patients with serum IMARs. Methods: Patients with stable angina pectoris (SAP), unstable angina pectoris (UAP), non ST segment elevation acute myocardial infarction (NSTEMI), ST segment elevation acute myocardial infarction (STEMI) and healthy people received physical examination were enrolled in this study. Then antioxidant index (TAS, GSH, SOD), myocardial oxidative damage index (MPO, MDA, AOPP) and albumin oxidative modification index (IMA, Alb, IMAR) were detected. Results: TAS, GSH, SOD content in UAP patients, NSTEMI patients, STEMI patients were lower than those of healthy subjects, SAP patient, MPO, MDA, AOPP content in UAP patients, NSTEMI patients, STEMI patients were higher than those of healthy subjects, SAP patients, IMAR content and IMAR ration of UAP patients, NSTEMI patients, STEMI patients were higher than those of healthy subjects, SAP patients; Alb content were lower than that of healthy subjects, SAP patients. IMAR was negatively correlated with TAS, GSH, SOD and positively correlated with MPO, MDA, AOPP. Conclusions: Patients with acute coronary syndrome have myocardial oxidative damage and abnormally increased serum IMRA. IMRA has good correlation with oxidative and antioxidant indices and it’s an ideal index to reflect state of acute coronary syndrome.

[KEY WORDS] Acute coronary syndrome; Ischemia-modified albumin; Oxidative damage; Myeloperoxidase