PPARα EXPRESSION IN ACS LYMPHOCYTES AND ITS CORRELATION WITH TNFα AND HS-CRP IN SERUM
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Objectives We investigate the level of peroxisome proliferator-activated receptors-α (PPARα) in peripheral blood lymphocytes from patients with acute coronary syndrome (ACS) and analyse the correlation among levels of PPARα, serum matrix tumour necrosis factor α (TNFα) and high sensitivity C-reactive protein (hs-CRP). The study is to confirm whether PPARα is involved in the development process of acute cardiovascular disease or not.

Methods Forty seven cases of ACS, between March 2009 and April 2010, were selected. ACS group were combined with 25 cases of unstable angina pectoris (UAP group) and 22 cases of acute myocardial infarction (AMI group). Twenty three healthy people as control group. Lymphocytes PPARα; Serum TNFα and hs-CRP in all subjects were measured by ELISA.

Results (1) Expression of PPAR α in peripheral lymphocytes of ACS patients than that of control group, 22.51±6.78 versus 45.44±5.20, p<0.01; (2) For all ACS patients, PPARα expression of AMI group was significantly less than that of UAP group, 16.27±3.50 vs 28.00±3.24, p<0.01; (3) The expression of TNFα and hs-CRP in ACS was significantly higher, 31.36±8.83 vs 11.67±2.61 ng/l, p<0.01, 12.27±5.90 vs 1.67±0.59 mg/l, p<0.01; (4) AMI patients with acute coronary syndrome subgroups of serum TNFα and the expression of hs-CRP compared with UAP were significantly lower, 39.09±6.28 vs 24.56±3.46 ng/l, p<0.01, 17.66±4.17 vs 7.53±1.22 mg/l, p<0.01; (5) PPARα was inversely associated with TNFα (r=−0.794, p<0.01) and hs-CRP (r=−0.797, p<0.01).

Conclusion There exists expression of PPARα in the peripheral blood lymphocytes both ACS patients and healthy people, but it is lower about the PPARα expression in ACS patients than that in healthy people; With the aggravation of acute coronary syndrome expression of PPARα further decline. The expression of TNFα and hs-CRP in ACS patients was significantly increase. Compared with PPARα the expression of TNFα and hs-CRP, was negatively correlated. PPARα may be involved in the pathogenesis of acute coronary syndrome and may be related to atherosclerotic plaque instability related.