Study on the correlation of circulating endothelial progenitor cells, vascular endothelial growth factor and cardiac function in patients with ST segment elevation myocardial infarction

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

[ABSTRACT] Objective: To explore the correlation of circulating endothelial progenitor cells (CEPCs), vascular endothelial growth factor (VEGF) in patients and cardiac function with ST segment elevation myocardial infarction (STEmI). Methods: From January 2013 to June 2014, 124 cases of STEmI were recruited and clinical data was collected. CEPCs, VEGF were detected and analyzed. Results: In cases of STEmI, the CEPCs rate and VEGF level results in positive correlation ($r=0.0057$, $P=0.001$). The CEPCs rate and VEGF level showed gradual elevation within 24h ($P<0.05$), and then reached a relative platform after 24h. According to Killip stage of cardiac function, the descending order of CEPCs rate and VEGF level was Killip II stage $>$ Killip III stage $>$ Killip I stage $>$ Killip IV stage. Conclusion: In STEmI, CEPCs rate was positively correlated with VEGF level. And severe cardiac dysfunction may interfere with VEGF secretion and CEPCs homing.

[KEY WORDS] Coronary heart disease; Vascular endothelial growth factor; Circulating endothelial progenitor cells; ST segment elevation myocardial infarction