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Objectives To find out the differences of cell adhesion molecule-related mRNAs expression between symptomatic pulmonary embolism (PE) and control group, and to investigate the interactions among activated leukocytes, platelets and endothelial cells.

Methods Whole human gene chip was applied to detect cell adhesion molecule-related mRNAs expression in symptomatic PE and control group, and then statistical analysis was performed.

Results In patients with PE, the expression of most mRNAs related to integrins which located in leukocytes and platelets was significantly up-regulated; the expression of mRNAs related to L-selectin and P-selectin glycoprotein ligand was significantly up-regulated, while the expression of mRNA related to E-selectin was significantly down-regulated; the expression of mRNAs related to classic cadherins and protocadherins tended to down-regulate as a whole, and the expression of mRNA related to vascular endothelial cell cadherin was significantly down-regulated; the expression of mRNAs related to the immunoglobulin superfamily had no obvious difference between the two groups.

Conclusions The results demonstrated that, in symptomatic PE patients, the adhesion of leukocytes and platelets were enhanced; the activation of endothelial cells was obviously weakened; the adherens junctions among endothelial cells were weakened, with the endothelium becoming more permeable.

GW23-e0726

GENOMIC CHARACTERISTICS OF ADHESION MOLECULES IN PATIENTS WITH SYMPTOMATIC PULMONARY EMBOLISM

doi:10.1136/heartjnl-2012-302920y.8