Objective To observe the effects of tongxinluo capsule on platelet activity and function of vascular endothelium as well as prognosis at different stage in patients with acute coronary syndrome after PCI.

Methods One hundred and sixty patients with acute coronary syndrome were randomly divided into tongxinluo (TXL) group (80 patients) and conventional treatment group (80 patients). Another 50 healthy people as control group. We examined the patient’s blood CD62p, CD63, glucose protein (GP) αβ/βα, and endothelium 1 (ET-1), von Willebrand factor (vWF), nitric oxide (NO) levels, and flow-mediated dilatation (FMD) in brachial artery from before treatment and the second day after the treatment of PCI in both group. Then the patients in TXL group received TXL treatment for 6 months (four tablet tid), and compared the results with conventional treatment group.

Results The ACS patient’s blood CD62p, CD63, GPαβ/βα, vWF and ET-1 levels increased significantly (all p<0.01). NO and FMD decreased significantly (p<0.01) when compared with healthy control group. The ACS patient’s plasma levels of vWF increased significantly (p<0.05), CD62p, CD63, GPαβ/βα while FMD decreased significantly (p<0.05) after
PCI group compared with before PCI group. In both TXL treatment group and convention treatment group, the patient’s plasma levels of CD62p, CD63, GP\(\alpha\beta/\beta\alpha\), vWF and ET-1 decreased significantly (p<0.05, p<0.01), FMD increased significantly (p<0.05, p<0.01) compared with pre-treatment group. There were significant different of all parameters above between TXL group and conventional treatment group (p<0.01, p<0.05). In addition, the parameter above showed significant different after treatment of 6 months than 2 months (p<0.01, p<0.05). There were two cases of sudden death, seven cases of recurrent angina, three cases of ventricular tachycardiac (VT)/ventricular fibrillation (VF) in conventional treatment group after 6 months, while there were one case of recurrent angina, one case of heart failure, without VT/ VF and sudden death occurred in the TXL treatment group after 6 months.

Conclusions TXL can inhibit the patient’s platelet activity and protect the vascular endothelium function as well as improve the prognosis after the treatment of PCI.