Objective To study the thrombolytic application of reteplase and the change of pulmonary arterial pressure in patients with the significant pulmonary embolism.

Methods Patients who were confirmed by 320 row helical CT whose pulmonary embolism was more than segmental. 20 mg diluted reteplase was given interval of 30 min 2 times by slow bolus. The changes of blood coagulation, clinical symptoms in patients were observed, as well as the pulmonary arterial pressure.

Results In 15 PE patients with male to female ratio of 4 (12/3), within 24 h after the reteplase thrombolysis, the patients with chest pain, dyspnoea relief were in 12 cases (80%); 2 h after thrombolysis, patients with cerebral haemorrhage was in 1 case (6%); 1 week after, the patients with the revascularisation prompted by pulmonary artery imaging were 12 (80%). The pulmonary artery pressure was observed by echocardiography in patients with pulmonary embolism, pulmonary arterial hypertension in patients before thrombolytic therapy were in 8 cases (53%), within 48 h after reteplase thrombolysis, the marked decline in patients with pulmonary hypertension, with a statistically significant difference (p<0.05).

Conclusions In patients with more than segmental pulmonary embolism by the 320-row spiral CT imaging, reteplase
thrombolysis was safe and effective, and could relieve symptoms and pulmonary vascular recanalisation rate. In pulmonary embolism patients with pulmonary hypertension, the pulmonary vascular recanalisation by thrombolysis can reduce the pulmonary arterial pressure.