Facilitated catheter directed thrombectomy of acute pulmonary emboli: a new facilitated regimen; preliminary results of an ongoing study

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Introduction

Facilitated catheter directed thrombolysis and thrombectomy are promising and effective strategies in the acute management of this disease perhaps more appropriate in patients with high bleeding risk.

Objective

We aimed to investigate the effectiveness of a new facilitated regimen of low dose thrombolytics (t-Pa) infusion contemplated with AngioJet (Solent Omni) mechanical thrombectomy catheter system in patients with acute high risk pulmonary emboli.

Methods and Materials

These are the preliminary results of a prospective ongoing study. Six consecutive patients have been involved, of whom half of them are male. All of them were in the submassive intermediate-high risk of Pulmonary Emboli with moderate right ventricle dysfunction. They all underwent local t-Pa infusion of 10-20 mg in total by introducing EV3 infusion catheters into each pulmonary artery for 15 hours. After contemplation of t-pa infusion control pulmonary angiography was performed. If residual thrombi persisted a rheolytic procedure by AngioJet (Solent Omni) mechanical thrombectomy was done. All patients were followed up to 3 months and all the clinical events were recorded (Table 1, 2).

Results

Patient two had a respiratory arrest during t-Pa infusion that was stabilized by entubation and mechanical ventilator administration. All patients showed effective response towards AngioJet catheter thrombectomy procedure. At follow up functional capacity was normally restored and heart systolic functions normalized.

Conclusion

The new facilitated catheter directed thrombectomy with low dose t-Pa infusion seems safe and effective. More patients are needed to accurately estimate this regimen.