

Successful Intra-catheter Thrombolysis of Massive Pulmonary Thromboembolism

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Introduction: Massive pulmonary thromboembolism(PTE) results in hemodynamic unstable condition as it makes severe right ventricle dysfunction. Usually systemic thrombolysis does not need central vein access. Here, we present a case of successful intra-catheter thrombolysis of massive PTE.

Case Report: A 67-year-old woman who underwent a surgery of right clavicle fracture which occurred after falling down from her bed, had a sudden heart attack during postoperative care. 5 times of cardiac resuscitation(CPR) was done. On hand-held echocardiography D-shaped left ventricle, enlarged right ventricle was observed. Pulmonary thromboembolism was suspected. Even though chest computed tomography(CT) is gold standard of diagnosis, it was unable to take CT because of unstable vital sign. Immediate intravenous heparin infused and interventional cardiologists applied extracorporeal membrane oxygenation(ECMO) through Rt.femoral artery and vein. Pulmonary artery angiography showed massive filling defect at right apicoposterior pulmonary artery. Catheter thrombus aspiration was performed. 20mg of actylase and additional heparin was infused through the catheter. Because of long lasting CPR and thrombolysis, there was anemia worsening, which hemopstrongly suspected bleeding. Hemothorax, ericardium, hemomediastinum, and hemoperitoneum was detected on CT. The patient applied continuous renal replacement therapy(CRRT) and transfusion was done. And then her vital sign was stabilized. As PTE improved, extubation and ECMO weaning was done. Intraveous heparin infusion was stopped, the patient took rivaroxaban instead and discharged.

Conclusion: As 30% of patients with pulmonary thromboembolism dies, immediate diagnosis, oxygenation, thrombolysis and adequate hemodynamic support is important. Here, we report a case treated with immediate diagnosis and catheter thrombolysis in a patient with massive, hemodynamic unstable PTE.

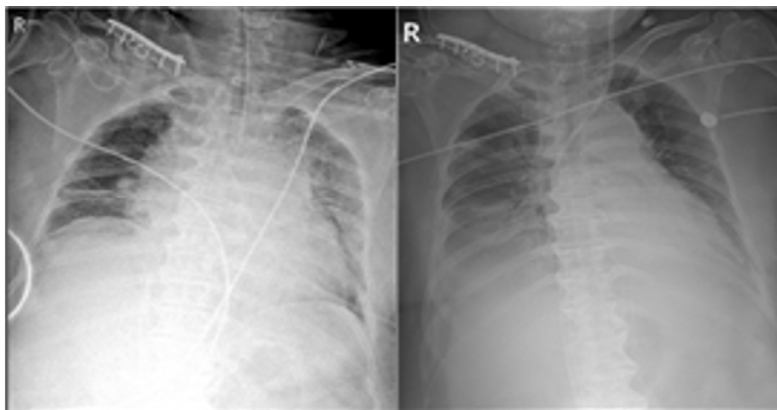


Figure 1. Chest X-ray of patient after catheter thrombus aspiration and heparin, actylase infusion (A), several days after move to intensive care unit (B)

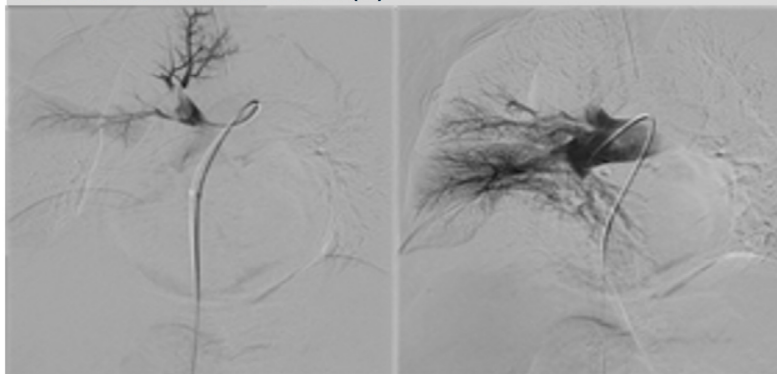


Figure 2. image of angiography, filling defect(arrow) was observed. Pulmonary thromboembolism was suspected.