Clinical trials of fibrinolysis for pulmonary embolism in all type of patients

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1 fibrinolytic

Trial	Treatments	Patients	Trials design and methods
half-dose t-PA vs no fibrinolysis			
MOPETT , 2012 n=NA follow-up: 28 months	half-dose thrombolysis versus standard regimen of anticoagulants alone	patients presenting with moderate PE	Parallel groups open
rt-PA vs no fibrinolysis			
PAIMS 2 , 1992 n=NA follow-up: 7 days	rt-PA 100 mg IV over 2 h and heparin versus Heparin 1750 IU/hr i.v. for 7 to 10 days	patients with angiographically documented pulmonary embolism	Parallel groups open Italy
Goldhaber , 1993 n=46/55 follow-up: 14 days	rt-PA 100 mg IV over 2 h then 1000 U/hr heparin,when PTT or TT was <2 times control. Subsequent heparin dose achieved PTT = 1.5 to 2.5 times the upperlimit of normal. versus heparin, initial dose 5000 U bolus followed by 1000 U/hr continuous i.v., 4 hr after the dose of heparin according to PTT. Target PTT = 1.5 to 2.5 times of normal	haemodynamically stable patients with acute pulmonary embolism	Parallel groups open US
streptokinase vs no fibrinolysis			
Tibbutt , 1974 n=17/13 follow-up: 3 days	intrapulmonary SK 600,000-U bolus, then 100,000 U/h for 72 h and intrapulmonary heparin versus 5000U heparin plus 100mg hydrocortisone infused over 30 mins through pulmonary artery catheter. Followed by 2500 U for 72 hr	life-threatening pulmonary embolism	Parallel groups open UK
Ly , 1978 n=14/11 follow-up: 10 days	streptokinase 250,000-U bolus, then 100,000 U/h for 72 h and heparin versus Heparin 15,000 IU initial dose i.v. followed by 30,000 IU/day continuous i.v., adjusted by TT	patients with major pulmonary embolism verified by angiography	Parallel groups open Norway
Jerjes-Sanchez , 1995 n=43/5 follow-up: 3 days	streptokinase 1,500,000 U IV over 1 h and heparin versus heparin alone	high clinical suspicion for massive pulmonary embolism	Parallel groups open
urokinase vs no fibrinolysis			

continued...

Trial	Treatments	Patients	Trials design and methods
Marini , 1988 n=20/10 follow-up: 7 days	urokinase 800,000 U/d IV for 72 h, UK 3,300,000 U IV for 12 h and heparin versus heparin	patients with pulmonary embolism	open
rt-PA vs placebo			
Konstantinides , 2002 n=118/138 follow-up: <30 days	100 mg alteplase given as 10 mg bolus followed by 90 mg i.v. infusion over 2 hours then i.v. heparin 1000 U/hr adjusted to maintain APTT of 2.0 to 2.5times the upper normal limit. Oral anticoagulation was started on day 3 versus placebo + i.v. heparin 1000 U/hr adjusted to maintain APTT of 2.0 to 2.5times the upper normal limit. Oral anticoagulation was started on day 3	patients with acute pulmonary embolism and pulmonary hypertensionor right ventricular dysfunction but withoutarterial hypotension or shock	Parallel groups double blind Germany
PIOPED , 1990 n=9/4 follow-up: 7 days	rt-PA 4080 mg IV over 90 min plus heparin versus placebo+heparin	patients with acute pulmonary embolism	Parallel groups double blind US
Levine , 1990 n=33/25 follow-up: 10 days	rt-PA 0.6 mg/kg IV over 2 min and heparin, initial bolus of 5000 U, then 30,000 U for first 24 hr continuous infusion,only interrupted for the duration of the study drug infusion versus placebo + heparin bolus of 5000 U, then 30,000 U for first 24 hr continuous infusion	patients with objectively established acute symptomatic pulmonary embolism	Parallel groups double blind Canada
tenecteplase vs placebo			
PEITHO *ongoing* [NCT00639743] n=NA follow-up: 7 days	tenecteplase (single i.v. bolus) versus placebo	patients with sub-massive pulmonary embolism	Parallel groups double-blind
urokinase vs placebo			
UPET , 1973 n=82/78 follow-up: <14 days	urokinase 2,000-U/lb bolus, then 2,000 U/lb per h IV for 12 h and heparin versus placebo + Heparin (a loading dose of 75 U/pound, then 10 U/pound/hr for 12 hr infusion, then heparin for a minimum of 5 days, followed by heparin or warfarin therapy for a total of 14 days)	patients with pulmonary embolism	Parallel groups double blind US
desmoteplase vs alteplase			
Tebbe , 2009 n=34 follow-up:	125, 180, and 250 microg/kg bodyweight desmoteplase versus 100 mg alteplase	acute massive pulmonary thromboembolism	Parallel groups NA

References

MOPETT, 2012:

PAIMS 2, 1992:

Dalla-Volta S, Palla A, Santolicandro A, Giuntini C, Pengo V, Visioli O, Zonzin P, Zanuttini D, Barbaresi F, Agnelli G PAIMS 2: alteplase combined with heparin versus heparin in the treatment of acute pulmonary embolism. Plasminogen activator Italian multicenter study 2. J Am Coll Cardiol 1992;20:520-6 [1512328]

Goldhaber, 1993:

Goldhaber SZ, Haire WD, Feldstein ML, Miller M, Toltzis R, Smith JL, Taveira da Silva AM, Come PC, Lee RT, Parker JA Alteplase versus heparin in acute pulmonary embolism: randomised trial assessing right-ventricular function and pulmonary perfusion. Lancet 1993;341:507-11 [8094768]

Tibbutt, 1974:

Tibbutt DA, Davies JA, Anderson JA, Fletcher EW, Hamill J, Holt JM, Thomas ML, Lee G, Miller GA, Sharp AA, Sutton GC Comparison by controlled clinical trial of streptokinase and heparin in treatment of life-threatening pulmonay embolism. Br Med J 1974;1:343-7 [4594580]

Ly, 1978:

Ly B, Arnesen H, Eie H, Hol R A controlled clinical trial of streptokinase and heparin in the treatment of major pulmonary embolism. Acta Med Scand 1978;203:465-70 [352100]

Jerjes-Sanchez, 1995:

Jerjes-Sanchez C, Ramrez-Rivera A, de Lourdes Garca M, Arriaga-Nava R, Valencia S, Rosado-Buzzo A, Pierzo JA, Rosas E Streptokinase and Heparin versus Heparin Alone in Massive Pulmonary Embolism: A Randomized Controlled Trial. J Thromb Thrombolysis 1995;2:227-229 [10608028]

Marini, 1988:

Marini C, Di Ricco G, Rossi G, Rindi M, Palla R, Giuntini C Fibrinolytic effects of urokinase and heparin in acute pulmonary embolism: a randomized clinical trial. Respiration 1988;54:162-73 [3073463]

Konstantinides, 2002:

Konstantinides S, Geibel A, Heusel G, Heinrich F, Kasper W Heparin plus alteplase compared with heparin alone in patients with submassive pulmonary embolism. N Engl J Med 2002;347:1143-50 [12374874]

PIOPED, 1990:

Tissue plasminogen activator for the treatment of acute pulmonary embolism. A collaborative study by the PIOPED Investigators. Chest 1990;97:528-33 [2106408]

Levine, 1990:

Levine M, Hirsh J, Weitz J, Cruickshank M, Neemeh J, Turpie AG, Gent M A randomized trial of a single bolus dosage regimen of recombinant tissue plasminogen activator in patients with acute pulmonary embolism. Chest 1990;98:1473-9 [2123152]

PEITHO, :

Single-bolus tenecteplase plus heparin compared with heparin alone for normotensive patients with acute pulmonary embolism who have evidence of right ventricular dysfunction and myocardial injury: rationale and design of the Pulmonary Embolism Thrombolysis (PEITHO) trial. Am Heart J 2012;163:33-38.e1 [22172434] 10.1016/j.ahj.2011.10.003

UPET, 1973:

The urokinase pulmonary embolism trial. A national cooperative study. Circulation 1973;47:II1-108 [4266893]

Tebbe, 2009:

Tebbe U, Bramlage P, Graf A, Lechleitner P, Bode C, Riess FC, Clemens N, Al-Rawi Y, Konstantinides S, Goldhaber SZ Desmoteplase in acute massive pulmonary thromboembolism. Thromb Haemost 2009;101:557-62 [19277420]

2 About TrialResults-center.org

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