

# Clinical trials of urokinase

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## 1 acute myocardial infarction

Trial	Treatments	Patients	Trials design and methods
<b>urokinase vs control</b>			
<b>USIM , 1991</b> n=1128/1073 follow-up: in hospital	urokinase bolus dose of 1 million U repeated after 60 minutes plus heparin versus control (heparin alone)	patients with acute myocardial infarction within 4 hours of the onset of pain	Parallel groups open Italy
<b>t-PA + urokinase vs t-PA</b>			
<b>TAMI 5 (t-PA+uroK vs tPA) , 1991</b> n=194/191 follow-up:	t-PA + urokinase versus t-PA	patient with acute myocardial infarction	open

└ More details and results :

- myocardial revascularization for acute myocardial infarction in all type of patients at <http://www.trialresultscenter.org/go-Q129>
- fibrinolysis for acute myocardial infarction in all type of patients at <http://www.trialresultscenter.org/go-Q260>

## References

### USIM, 1991:

Rossi P, Bolognese L Comparison of intravenous urokinase plus heparin versus heparin alone in acute myocardial infarction. Urochinasia per via Sistemica nell'Infarto Miocardico (USIM) Collaborative Group. Am J Cardiol 1991;68:585-92 [[1877476](#)]

### TAMI 5 (t-PA+uroK vs tPA), 1991:

Califf RM, Topol EJ, Stack RS, Ellis SG, George BS, Kereiakes DJ, Samaha JK, Worley SJ, Anderson JL, Harrelson-Woodlief L Evaluation of combination thrombolytic therapy and timing of cardiac catheterization in acute myocardial infarction. Results of thrombolysis and angioplasty in myocardial infarction-phase 5 randomized trial. TAMI Study Group. Circulation 1991 May;83:1543-56 [[1902405](#)]

## 2 acute coronary syndrome

Trial	Treatments	Patients	Trials design and methods
<b>intracoronary urokinase vs placebo</b>			
<b>TAUSA , 1994</b> n=232/237 follow-up: hospital stay	intracoronary urokinase 250000 UI or 500000 UI versus placebo	ischemic rest pain with or without a recent (<1 month) infarction	Parallel groups double blind USA

More details and results :

- myocardial revascularization for acute coronary syndrome in all type of patients at <http://www.trialresultscenter.org/go-Q22>
- fibrinolysis for acute coronary syndrome in all type of patients at <http://www.trialresultscenter.org/go-Q223>

## References

### TAUSA, 1994:

Ambrose JA, Almeida OD, Sharma SK, Torre SR, Marmur JD, Israel DH, Ratner DE, Weiss MB, Hjemdahl-Monsen CE, Myler RK Adjunctive thrombolytic therapy during angioplasty for ischemic rest angina. Results of the TAUSA Trial. TAUSA Investigators. Thrombolysis and Angioplasty in Unstable Angina trial. Circulation 1994;90:69-77 [8026054]

## 3 venous thrombosis

Trial	Treatments	Patients	Trials design and methods
<b>urokinase vs no fibrinolysis</b>			
<b>Kiil , 1981</b> n=20 follow-up:	urokinase 200,000 U IV over 24 hours. After 18 hours, heparin loading dose of 15,000 units then 40,000 U/day for 5 days (+placebo) versus heparin 40,000 U/day IV for 6 days (+placebo)	patients with venographically confirmed DVT duration <72 hours	Parallel groups Double blind Denmark
<b>Schweizer (urokinase) , 1998</b> n=NA follow-up:	Urokinase 100,000 IU/hr IV into pedal vein continuously for 7 days. Heparin IV for 7 days. Plasminogen monitored. Warfarin from day 7 to 12 monthsd=132 versus heparin IV, adjusted for 7 days	patients with venographically confirmed DVT of leg duration <7 days	Parallel groups single blind Germany

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Trial	Treatments	Patients	Trials design and methods
Schweizer (local urokinase) , 2000 n=NA follow-up:	Local urokinase 100,000 IU/day infused continuously. Fibrinogen and plasminogen monitored. Heparin IV given concomitantly versus heparin IV, adjusted	patients with thrombosis of popliteal or more proximal veins confirmed by venogram at more than one level of duration <9 days	Parallel groups single blind Germany
Schweizer (systemic urokinase) , 2000 n=NA follow-up:	Systemic urokinase 5,000,000 IU/day over 4 hours for up to 7 days. IV heparin given concomitantly versus heparin IV, adjusted	patients with thrombosis of popliteal or more proximal veins confirmed by venogram at more than one level of duration <9 days	Parallel groups single blind Germany

More details and results :

- fibrinolysis for venous thrombosis in all type of patients at <http://www.trialresultscenter.org/go-Q100>

## References

### Kiil, 1981:

∞ Kiil J, Carvalho A, Saks P, Nielsen HO Urokinase or heparin in the management of patients with deep vein thrombosis? Acta Chir Scand 1981;147:529-32 [7048826]

### Schweizer (urokinase), 1998:

Schweizer J, Elix H, Altmann E, Hellner G, Forkmann L Comparative results of thrombolysis treatment with rt-PA and urokinase: a pilot study. Vasa 1998;27:167-71 [9747153]

### Schweizer (local urokinase), 2000:

Schweizer J, Kirch W, Koch R, Elix H, Hellner G, Forkmann L, Graf A Short- and long-term results after thrombolytic treatment of deep venous thrombosis. J Am Coll Cardiol 2000;36:1336-43 [11028492]

### Schweizer (systemic urokinase), 2000:

Schweizer J, Kirch W, Koch R, Elix H, Hellner G, Forkmann L, Graf A Short- and long-term results after thrombolytic treatment of deep venous thrombosis. J Am Coll Cardiol 2000;36:1336-43 [11028492]

## 4 pulmonary embolism

Trial	Treatments	Patients	Trials design and methods
urokinase vs no fibrinolysis			

continued...

<b>Trial</b>	<b>Treatments</b>	<b>Patients</b>	<b>Trials design and methods</b>
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
<b>urokinase vs placebo</b>			
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

More details and results :

- fibrinolysis for pulmonary embolism in all type of patients at <http://www.trialresultscenter.org/go-Q110>

## References

### 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]

### UPET, 1973:

The urokinase pulmonary embolism trial. A national cooperative study. Circulation 1973;47:III1-108 [4266893]

Entry terms: Urokinase-Type Plasminogen Activator, Urokinase Type Plasminogen Activator, U-Plasminogen Activator, U Plasminogen Activator, U-PA, Urinary Plasminogen Activator, Urokinase, Renokinase, Abbokinase, Kidney Plasminogen Activator, Single-Chain Urokinase-Type Plasminogen Activator, Single Chain Urokinase Type Plasminogen Activator,