



Intra-arterial fibrinolytic agents may be more effective than intravenous agents for peripheral arterial occlusion

Clinical question

Which are the most effective fibrinolytic agents for peripheral arterial occlusion?

Bottom line

There was some evidence to suggest intra-arterial (IA) recombinant tissue plasminogen activator (rt-PA) was more effective than IA streptokinase or intravenous (IV) rt-PA in improving vessel patency in people with peripheral arterial occlusion (PAO). There was no evidence IA rt-PA was more effective than IA urokinase for patients with PAO. There was some evidence initial lysis may be more rapid with rt-PA, depending on the regimen. The incidence of haemorrhagic complications varied with fibrinolytic regimen but there were no statistically significant differences between IA urokinase and IA rt-PA. IV rt-PA and IA streptokinase were associated with a significantly higher risk of haemorrhagic complications than IA rt-PA. The drugs investigated were streptokinase, urokinase, rt-PA and pro-urokinase.

Caveat

No particular drug was more effective in preventing limb loss or death than another. All of the findings came from small studies, and the general paucity of results means it is not possible to draw clear conclusions.

Context

Peripheral arterial thrombolysis is used in the management of peripheral arterial ischaemia. Streptokinase was originally used but safety concerns have led to the introduction of other agents such as urokinase and rt-PA. These newer agents were thought to have potential advantages, such as improved safety, greater efficacy, and a more rapid response.

Cochrane Systematic Review

Robertson I et al. Fibrinolytic agents for peripheral arterial occlusion. Cochrane Reviews 2010, Issue 3. Article No. CD001099. DOI: 10.1002/14651858.CD001099.pub2.

This review contains 5 studies involving 687 participants.

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