



Percutaneous vascular interventions may be beneficial in stroke

Clinical question

How effective are percutaneous vascular interventions in patients with acute ischaemic stroke?

Bottom line

Compared with non-thrombolytic standard medical treatment, percutaneous vascular interventions administered up to six hours after ischaemic stroke significantly increased the proportion of patients with favourable outcomes three months after stroke. The trials tested either intra-arterial urokinase or recombinant pro-urokinase versus an open control. One trial used guidewire-mediated clot disruption in some patients randomised to the intervention group. Most data came from trials of middle cerebral artery territory infarction. Long-term risk of death was unaffected.

Caveat

The interventions significantly increased the risk of symptomatic intracranial haemorrhage within 24 hours of treatment. Given the evidence women respond more favourably to thrombolysis than men,¹ the overall excess of women in the treatment group compared with the control group may have exaggerated the overall treatment effect. It was not clear from the studies what the time window is within which treatment is beneficial; what types of arterial blockage are most likely to respond; whether mechanical devices are effective, and whether any of these treatments are better than standard thrombolytic drugs.

Context

Most disabling strokes are due to thrombosis of a large artery. Prompt removal of the blockage with intra-arterial thrombolytic drugs or mechanical devices, or both, can restore blood flow before major brain damage has occurred, leading to improved recovery.

Cochrane Systematic Review

O'Rourke K et al. Percutaneous vascular interventions for acute ischaemic stroke. *Cochrane Reviews*, 2010, Issue 10. Article No. CD007574. DOI: 10.1002/14651858.CD007574.pub2.

This review contains 4 studies involving 350 participants.

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Further references

1. Kent DM et al. *Stroke* 2005;36:62–65.

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