


Editor's Comment

A reply to this letter was requested from the authors but not received. The pole test, as described by Smith et al, only designed for use in diabetes with suspected critical limb ischaemia. In these patients, a persistent signal at the ankle despite full elevation of the leg means that perfusion is usually adequate. However, the suggestion of using toe pressures seems a good one provided a sufficiently sensitive Doppler probe is used.

Pulse Spray Thrombolysis

Sir,

We would like to comment on the paper by Yusuf et al. (Eur J Vasc Endovasc Surg 1995; 10:136-141). This paper sets out to prove that pulse spray thrombolysis is quicker than conventional low-dose infusion, and in this aspect it appears to have achieved its aim within the inevitable confines of a total study population of 18 patients. However, the authors then state that there is no significant difference in clinical success "due to small numbers", and that to prove such a difference would require unachievable numbers of patients.

Whilst we sympathise with the logistics of such a proposition, we must emphasise that we do not have any evidence in terms of safety, overall clinical efficacy or long term benefit favouring pulse-spray or even high dose bolus over conventional lysis techniques.

We agree that a more rapid time to lysis is desirable for the acutely ischaemic limb with marked neurosensory deficit, but the vast majority of limbs can survive receiving thrombolysis via a conventional regime with corrective interventional or surgical techniques as required.

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Authors Reply

Sir,

Messrs. Berridge and Kessel argue that there is no advantage in achieving a reduction in the duration of thrombolytic therapy. However, they fail to support this with any evidence. Conventional thrombolysis using a low dose thrombolytic agent requires 24-48 h of treatment during which time monitoring on a high dependency or intensive care unit is required. In addition, out of hours angiography and maintenance of optimum catheter position is required. By contrast, thrombolytic therapy can be completed within a few hours in most cases with Pulse-Spray thrombolysis (PST). It is difficult to underestimate the potential advantages of this difference. Moreover, contrary to their experience, we still encounter many patients with severely ischaemic limbs who are deemed unsuitable for a prolonged trial of conventional thrombolytic therapy.

The aim of our randomised study was to assess the difference in duration of lysis and not the clinical outcome. The sample size was more than adequate for this purpose. However, as pointed out in our paper the number of patients required to demonstrate a significant difference in clinical outcome is beyond the scope of any single centre. Even an organisation as large as the Thrombolysis Study Group has not been able to address this issue in a multi-centre study. The trend in thrombolytic therapy in the U.K. has therefore, inevitably followed results of non-randomised studies. Historical controls have been used to assess the results of new agents and techniques. The wide spread shift in the choice of thrombolytic agent from Streptokinase to tissue plasminogen activator (rt-PA) for instance was led by the improved results observed with rt-PA in comparison to previous experience with Streptokinase.1 Our results with Pulse-Spray thrombolysis in 100 consecutive cases are superior to the previous experience with conventional thrombolysis in our unit. The success rate at 30 day being 70% with PST compared to 58% with rt-PA and 41% with Streptokinase using conventional lysis.2

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References
