

PostScript

LETTERS

Misleading conclusions on rt-PA treatment in the very elderly

The effectiveness of rt-PA in the elderly is an important but as yet incompletely resolved topic. In a recent paper in this journal,¹ Mouradian *et al* provide convincing data that patients older than 80 years who receive rt-PA are less likely to have a favourable outcome than their younger counterparts. This is in keeping with our own data showing that 5 of 24 patients (21%) treated with rt-PA aged 80 years or older were independent (mRS 0–2) after three months, compared with 39 of 77 patients younger than 80 years (51%).

However, their data and ours provide no indication that rt-PA is less effective in the elderly. The chance of a favourable outcome from a stroke declines with advancing age.² To show that the effectiveness of rt-PA decreases with age, the authors would need to have demonstrated that the worse outcome in the very elderly with rt-PA is more pronounced than in the group without rt-PA. This of course can only be achieved, ideally, in randomised studies or otherwise by comparison with age matched cohorts that have not received rt-PA.

An example of a similar situation is the following. It is well established that the outcome of treatment with rt-PA is worse in severe strokes than in those with less severe stroke.³ This does not mean that the effectiveness of rt-PA is any less in more severe strokes. In a reanalysis of the NINDS trial, the prognosis of patients with a National Institutes of Health Stroke Scale (NIHSS) score of ≥ 20 was much worse than in patients with an NIHSS score of 6–10. Nonetheless, the odds ratios for effectiveness of rt-PA were equally high (2.6) in the two groups.⁴

We agree that the treatment of the very elderly with rt-PA needs to be closely monitored and further studies are required. However, the conclusion that “older patients are much less likely to benefit from iv rt-PA” and the title suggesting that actual effectiveness is compared in this study are misleading and may unjustly lead physicians to withhold rt-PA in very elderly patients.

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doi: 10.1136/jnnp.2005.082982

Competing interests: None declared.

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Authors' reply

As indicated in our paper, intravenous rt-PA did not offer the same benefit to patients older than 80 years of age as it did to their younger counterparts. A comparable finding has since been reported by Berrouschot *et al*.¹ We did not suggest withholding iv rt-PA in the elderly. However, we cautioned about the possible shortcomings of extrapolating study results from younger to older (>80 years) patient populations. We also raised questions that need further discussion and study.

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Competing interests: None declared.

Reference

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Leech therapy in the treatment of median nerve compression due to forearm haematoma

Heckmann *et al*¹ describe a case of forearm compartment syndrome treated with leeches. A patient receiving anticoagulant drugs following radial arterial catheterisation complained of pain, swelling, and hardening of his forearm, with motor and sensory deficit of the hand. There was an increase in forearm girth. This patient was treated by application of 13 leeches to the volar aspect of the forearm. According to the report, the treatment was successful and at a three month follow up appointment there were no residual neurological signs.

In compartment syndrome, the only pertinent investigation is measurement of intracompartmental pressures. Effective treatment is surgical and any delay is potentially disastrous. The authors did not confirm their diagnosis by pressure measurements and their follow up evaluated median nerve function but not the integrity of the forearm muscles, which are most likely to be affected by a compartment syndrome. Leeches will not normally feed on stagnant blood and their bite does not extend deeper than the dermis, making it inconceivable that they can have any influence on compartment syndrome. In this case resolution must have occurred spontaneously, assuming the correct diagnosis. This case report is misleading and potentially dangerous and we ask that you publish our comments.

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Competing interests: None declared.

Reference

- 1 Heckmann JG, Dütsch M, Neundörfer B, *et al*. Leech therapy in the treatment of median nerve compression due to forearm haematoma. *J Neurol Neurosurg Psychiatry* 2005;76:1465.

Authors' reply

We thank Dr Schenker and colleagues for their critical comment from the viewpoint of hand and plastic surgeons. We agree with them that in the compartment syndrome of the forearm the only confirmatory investigation is measurement of intracompartmental pressure. In our case, however, the patient's clinical condition was such that it allowed a less invasive therapeutic procedure. As described in our short report, we applied medical leeches after consultation with a hand surgeon at our institution and under continued clinical supervision of the patient in hospital. Exactly this point is emphasised in the Methods and Discussion sections of our article. We strongly disagree with the view that the effect of leech therapy does not extend into deeper layers than the dermis. Several reports^{1–6} and reviews^{7–9} on this topic, and our own observations,¹⁰ allow us to conclude that leeches can suck blood from deeper layers and are a useful therapeutic option in similar cases. Although we cannot exclude spontaneous recovery in our patient, the close time relation between the application of the leeches and clinical improvement is very suggestive of the success of this therapeutic regimen. As we describe and recommend in our report, leech therapy should only be considered after consultation with an experienced hand surgeon.

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Competing interests: None declared.

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