Response to ‘Re. Benefits of Remote Ischemic Preconditioning in Vascular Surgery’

The authors make a good point: discrepancy between animal and clinical data is multifactorial, and the factors they cite are likely to be an influence.

The most recent, properly powered randomised controlled trial (RCT) of remote ischaemic preconditioning (RIPC) in cardiac surgery avoided the use of volatile anaesthetic agents to avoid pharmacological preconditioning.1 This trial showed no difference between the RIPC and no RIPC groups. Conversely, the large RIPCON (Remote Ischemic Preconditioning) trial of RIPC in cardiac surgery is currently recruiting using volatile agents to avoid remifentanyl,2 which is also associated with pharmacological preconditioning.3 This highlights one of the problems with medications and RIPC: it might be impossible to avoid those that effect RIPC completely, but trials can adjust for the least powerful. Additionally, patients might fare worse with the preconditioning effect of RIPC than they would have done with the preconditioning effect of the medication being withheld. Another problem is that the mechanisms of interference are still poorly understood, and it is likely that additional, commonly prescribed medicines have an effect on RIPC.2,3 Other factors such as diabetes are common in vascular patients should be corrected for if trials are properly powered.

Protocols for other trials currently or about to recruit are heterogeneous in their approach to correcting for these factors. To date, 102 trials of remote ischaemic preconditioning are registered on ClinicalTrials.gov. It is imperative that trialists recognise and attempt to correct for these factors as early as possible. Without this, we risk publishing large, flawed trials that essentially destroy all interest in RIPC without a rigorous method.

REFERENCES


Thrombolysis in Carotid-Related Stroke Patients: What About Plaque Hemorrhage and Disruption?

The routine practice of thrombolysis in ischemic stroke patients is derived from well-conducted, randomized controlled trials (RCTs),1 which are the foundation of evidence-based medicine (EBM). Those studies have proved themselves extremely useful for stroke patients, helping so many people to have better outcomes after their strokes. Currently, intravenous thrombolytic therapy is recommended within 4.5 hours of the onset of symptoms in patients with acute ischemic stroke, once intracranial bleeding has been excluded by computed tomography.2,3 The exact identification of the site of occlusion causing the ischemia or, more in general, of the exact cause of stroke, is not considered mandatory before starting fibrinolytic therapy, as none of the RCTs studying the effect of rt-PA in ischemic stroke patients was designed to address the differential effects on different types or causes of ischemic strokes by using vascular imaging.4,5 Hence, a carotid axis scan is not routinely performed until the rt-PA administration has been completed. Unfortunately, it is likely that not all the patients receiving intravenous systemic rt-PA will gain the greatest efficacy and benefit from fibrinolytic therapy, and this is probably related to the lack of a careful diagnosis of the stroke etiology.1 In their capacity as stroke-treating physicians, vascular surgeons sometimes find themselves in the awkward