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Acute stroke management

On behalf of the Canadian Association of Emergency Physicians (CAEP), the following letter is the CAEP's official response to the articles on acute stroke management in the September 2001 issue.[1,2]

We congratulate the author of "Current management of acute ischemic stroke, Part 1[1] and Part 2"[2] for a concise summary of randomized controlled studies on thrombolysis in acute stroke. Comments that are particularly important are: "thrombolysis is an option for only a few stroke patients" and "thrombolysis must be carried out in centres prepared for neurosurgical intervention." These cogent restrictions are key to optimal stroke management.

The CAEP has published recommendations this year[3] encouraging restriction of thrombolysis to tertiary care centres using formal clinical practice protocols with outcome monitoring and to well constructed trials. A cohort study of patients in Cleveland, Ohio, has demonstrated the considerable risk of thrombolytics for stroke if they are used in the community without such restrictions.[4]

The National Institute of Neurological Disorders and Stroke study was quite positive for use of tissue plasminogen activator (tPA) for stroke,[5] but a recent analysis of NINDS data demonstrated that the actual benefit is almost completely restricted to patients treated within 90 minutes, not 3 hours as the original article stated.[6] This would make intervention almost impossible except in very rare cases. As Dr Herd has stated, the Cochrane meta-analysis by Wardlaw et al[7] was not a strong endorsement of tPA, given the other markedly negative thrombolysis studies. It suggested that this medication "may be associated with less hazard."

A national postmarketing database is accumulating cases of tPA in acute stroke. Its data are being held as proof of efficacy of tPA by those who support its use.[8] Unfortunately, as summarized by Hoffman in an editorial,[9] this database is not objective evidence. There is no way to ensure that all cases, especially those with negative outcomes, are reported, nor even that the results submitted are accurate. The database is of limited, if any, value.

There is no doubt that organized stroke care improves outcomes considerably.[10] Use of acetylsalicylic acid and the organization of stroke teams has been key in this, as stated by Phillips and Gubitz.[11] Thrombolysis has yet to be shown to hold anything more than a very limited role in treatment of this disease. Its benefits will be restricted to rare patients presenting within minutes of symptom onset to tertiary care centres (unless new data overturn the considerable information accumulated to date). We cannot support widespread emergency department use of thrombolysis for stroke with the data available.

We strongly endorse other therapies for which the benefits clearly outweigh the risks. These include use of ASA, prevention of aspiration, early rehabilitation, and establishment of stroke units and protocols. We also hope that further treatments will be forthcoming that benefit patients with this common and serious affliction.

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