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Preface

In May 1997, Amsterdam was the venue for the 6th European Stroke Conference. The audience was drawn from a wide range of disciplines, reflecting the diverse specialities involved in the management of the stroke patient. In conjunction with this conference, a scientific symposium entitled 'Measurements of Acute Stroke Events and Outcome: Present Practice and Future Hope' was held. This meeting was sponsored by an educational grant from Janssen-Cilag.

Neurological scores based on patient features have prognostic value in stroke. Although useful in the assessment of neurological deficit, these scales have a disputed value. Investigations have shown that many scales are basically equivalent in the assessment of stroke patients, which facilitates comparison between studies and meta-analysis. However, differences in the number of features included, and the weighting assigned to these, can make scale unwieldy or unsuitable for use over the whole range of severity seen in stroke. In particular, general neurological scales can result in multiple minor deficits giving the same score as a single major deficit. Nonetheless, when symptom assessment is begun promptly after stroke onset, many scales can provide precise predictors of mortality and functional outcome.

The various techniques available for MRI aid patient prognosis following stroke. These techniques are readily available in the clinical setting and offer a valuable insight into the changes occurring in brain tissue at this crucial time. Although large-scale trials of MRI in early stroke are a complex endeavour, they are warranted to optimise the use of this technique. In particular, they may verify the benefit of combined diffusion- and perfusion-weighted imaging.

Stroke is a broad descriptor for a variety of neurological impairments. The advent of modern imaging tech-

niques has led to a refinement of the standard work-up of stroke subtypes. These techniques permit precise definition of ischaemic and haemorrhagic lesions, and differentiation of chronic and acute lesions. Further benefits include the evaluation of patient prognosis, the assessment of new drug therapies and optimal patient selection for treatment in early stroke.

The fate of tissue in the penumbral zone can be used to evaluate the benefit of stroke therapies. Quantitative neuroimaging is of great benefit in the study of this zone, using parameters such as cerebral blood flow and cerebral metabolic rates of oxygen and glucose as markers. The eventual use of tracers for neuronal integrity could aid patient assignment to various therapeutic strategies and even widen the time window for recruitment.

Trials of stroke therapies have potential impact on the millions who suffer acute stroke world-wide each year. Simplicity is the key to such studies which, in order to yield reliable results, need to recruit large cohorts of patients. Lessons can be learned from past clinical trials, such as those assessing the benefit of thrombolysis in acute myocardial infarction. Consideration must also be given to the best design for trials to evaluate stroke therapies. Large, simple trials have proved feasible in acute stroke and may now provide the means to study the clinical utility of potential therapies for this condition.

Stroke remains a major therapeutic challenge to clinicians world-wide. Refined imaging techniques, particularly when used early after stroke onset, provide rapid and precise data on the nature of the neurological impairment. The continued evaluation of potential new therapies should allow us to capitalise on this information and turn it to the patient's advantage.