Stroke
Towards better management

SUMMARY AND RECOMMENDATIONS OF A REPORT OF THE ROYAL COLLEGE OF PHYSICIANS

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Summary
All doctors, and most of their patients, are familiar with the consequences of stroke. In 1985 more than 70,000 men and women over the age of 65 died after a stroke and only one third of the survivors of stroke made a good recovery. It is thus a major source of chronic disability, placing a very heavy burden on patients’ relatives and friends and consuming a great deal of NHS resources.

The purpose of this Report is to set out guidelines for the clinical, radiological and pathological assessment of stroke, to suggest how to care for and rehabilitate patients who have suffered a stroke, and to evaluate and recommend measures for its prevention.

The Report emphasises the need to use standard terms for the clinical description and classification of stroke, and the assessment of degrees of disability. It traces its changing epidemiology in the UK and in other countries and assesses the significance of putative risk factors such as hypertension, smoking, obesity, alcohol, diabetes, serum cholesterol, oral contraceptives and ischaemic heart disease. It sets out the indications for admitting patients to hospital and how they should be investigated, including the value of CT scanning at different intervals after the stroke has occurred.

The Report describes the organisational aspects of the care of stroke patients during the acute phase, in the early recovery phase and in the longer term rehabilitation. The ideal requirements include a small but committed multidisciplinary stroke care team, with an awareness of psychological problems that may occur after a stroke; a rehabilitation ward for patients in the recovery phase may also be of value, but this has not yet been fully assessed.

The Report is concerned that there is a dearth of medical staff adequately trained in the medical aspects of long-term disability and makes recommendation for their training as well as that of nurses.

Recommendations

Standard nomenclature
1. Clinical descriptions of stroke should observe standardised conventional nomenclature when using the terms ‘completed stroke’, ‘transient ischaemic attack’ etc. Standardised terms are also available for degrees of disability in terms of activities of daily living and these should be more widely known.

Mortality and incidence rates
2. Geographical differences and changes in stroke mortality over time reported from many parts of
the world suggest that environmental factors may play a part in aetiology. There are very few studies of stroke incidence as opposed to mortality. Because incidence rates are also probably changing there is a need for further prospective studies in defined populations.

Stroke prevention

3. Epidemiological data strongly support the importance of chronically elevated blood pressure in the causation of stroke. Control of blood pressure is the single most important factor in its prevention.
   a. More attention should be paid to the most effective method of detection, the management of hypertension in the elderly, the significance of systolic and diastolic levels, and the management of mild hypertension by dietary or pharmacological means.
   b. A sustained diastolic blood pressure of greater than 100 mmHg needs treatment in most circumstances (except perhaps in patients over 75 years).
   c. Where reduction cannot be achieved by dietary means, as by reducing weight or alcohol intake, pharmacological treatment should be recommended.
   d. There is a need for more public awareness of the dangers of hypertension, the effectiveness of treatment and the value of early detection.

4. Cigarette smoking and heavy alcohol consumption should be strongly discouraged. Associated diseases, such as diabetes, ischaemic heart disease and hyperlipidaemia, require treatment in their own right.

5. Long-term anticoagulation is still recommended for secondary stroke prevention in those patients shown to have an intra-cardiac source of emboli.

6. The place of carotid endarterectomy in the prevention of stroke must await the results of two major controlled trials now in progress. Improvements in surgical technique have resulted in a progressive reduction in operative morbidity and mortality in recent years.

7. Aspirin can be recommended to patients who have had a transient ischaemic attack, including amaurosis fugax, or have survived a stroke. The most effective dose is not known, but 300 milligrams daily has been suggested. Further research on the optimal dosage and on other anti-platelet agents should continue, but there is no indication at present that other drugs should be used to supplement or replace aspirin.

Acute stroke management

8. When considering whether or not to admit patients with acute stroke to hospital, the presence of swallowing difficulty is an important feature and one which can be more easily managed in a hospital setting.

9. CT scan. This investigation is invaluable in many patients for whom the diagnosis is in doubt or when it is necessary to distinguish haemorrhage from infarction. We strongly recommend that every district hospital should have a CT scanner on site.

10. Of the various treatments advocated for acute stroke, naftidrofuryl and nimodipine have been claimed to reduce early mortality. These require further evaluation in properly controlled trials before any general recommendations for wider use.

11. In patients with evidence of brain swelling resulting from ischaemia, intravenous glycerol seems to be an effective method of controlling raised intracranial pressure.

Complications of stroke

12. Deep vein thrombosis is a frequent and largely preventable complication of stroke. Further trials of various anticoagulant regimens are needed.

13. Caution is recommended in reducing raised blood pressure in the first twenty-four hours after a stroke. Hypertension in such patients is often self-limiting and over-zealous treatment may be harmful.

Recovery phase

14. There is no firm evidence to justify the widespread establishment of specialised intensive care units for acute stroke, although these units may be an important means of assessing new therapy.

15. The requirements for standards of care for stroke patients include: thorough medical assessment, accurate records of changes in the patient, awareness of the psychological problems that may occur after stroke, care by nurses trained in the management of stroke, a simple rehabilitation programme, ideally managed by a stroke care team. Other requirements are listed in the full Report.

16. As stated above, certain basic standards of provision are required for stroke survivors in hospital, and at present these standards are not always met in general wards. For this reason, some degree of segregation of stroke patients into rehabilitation wards is helpful during the recovery phase.
17. Discharge from hospital should be carefully planned after consultation with relatives and support services.

18. Stroke patients who have to remain in hospital or be cared for in a nursing home should receive a high quality of medical and nursing care. It is particularly important to maintain the interest and morale of both patients and staff. Physiotherapy and speech therapy have a major role at this stage.

19. Dependent patients who return home require continuing treatment for both their physical and psychological needs, particularly depression.

20. The present multi-disciplinary approach to rehabilitation has some advantages but requires simplification. We support the concept of the small specialised stroke team and consider that, ideally, it should operate both in the community and in the hospital and have close links with the departments of geriatric medicine and neurology. The number of people involved should be kept small, possibly by fusing some duties of the remedial team.

21. Physiotherapists, speech therapists and occupational therapists are involved in the recovery stage and rehabilitation of stroke patients. Studies are needed to develop new methods of therapy and assessment. The concept of the generic 'stroke therapist' requires evaluation.

22. A consultant should be designated as responsible for the development of the District Stroke Disability Service. He might also have responsibility for other areas of disability. The consultant could come from any number of backgrounds, including general medicine, neurology or geriatrics. Some experience in neurology and disability is essential.

23. We support the extension of training courses for physicians in medical aspects of long-term disability. Teaching hospitals should run comprehensive courses in rehabilitation medicine which should include organisational, as well as medical, aspects of the subject. Shorter refresher courses should be available to enable consultants to keep abreast of new developments.

24. Nurses should receive special training in both physical and psychological management of stroke patients, in the acute and recovery stages.

25. The training of medical students to prepare them for a preventive as well as a therapeutic role in stroke is an educational goal of the first importance for those entering general practice.

26. The burden on carers, who are often family members, in the rehabilitation of stroke patients can be enormous. Statutory services should ensure that the needs of these vital people are provided for.

Use of resources

27. In an ageing population, the residual disability resulting from stroke in the elderly will be a continuing medical and economic problem. We recommend further studies in community care as an alternative to institutional care for this group of patients.

Copies of the full Report are available from the Royal College of Physicians, price £7.00.