



**CONSENSUS GUIDANCE**

**ON**

**THE MANAGEMENT OF**

**ACUTE STROKE**

June 1999

This booklet has been published by CREST (the Clinical Resource Efficiency Support Team).

CREST is a small committee of health care professionals established under the auspices of the Central Medical Advisory Committee, to promote clinical efficiency in the health service in Northern Ireland while ensuring that the highest possible standard of clinical practice is maintained.

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# **CONSENSUS GUIDANCE ON THE MANAGEMENT OF ACUTE STROKE**

## **Introduction**

In February 1998 the CREST Drugs Advisory Group set up a working group on new drugs in the management of acute stroke to provide professional advice on:

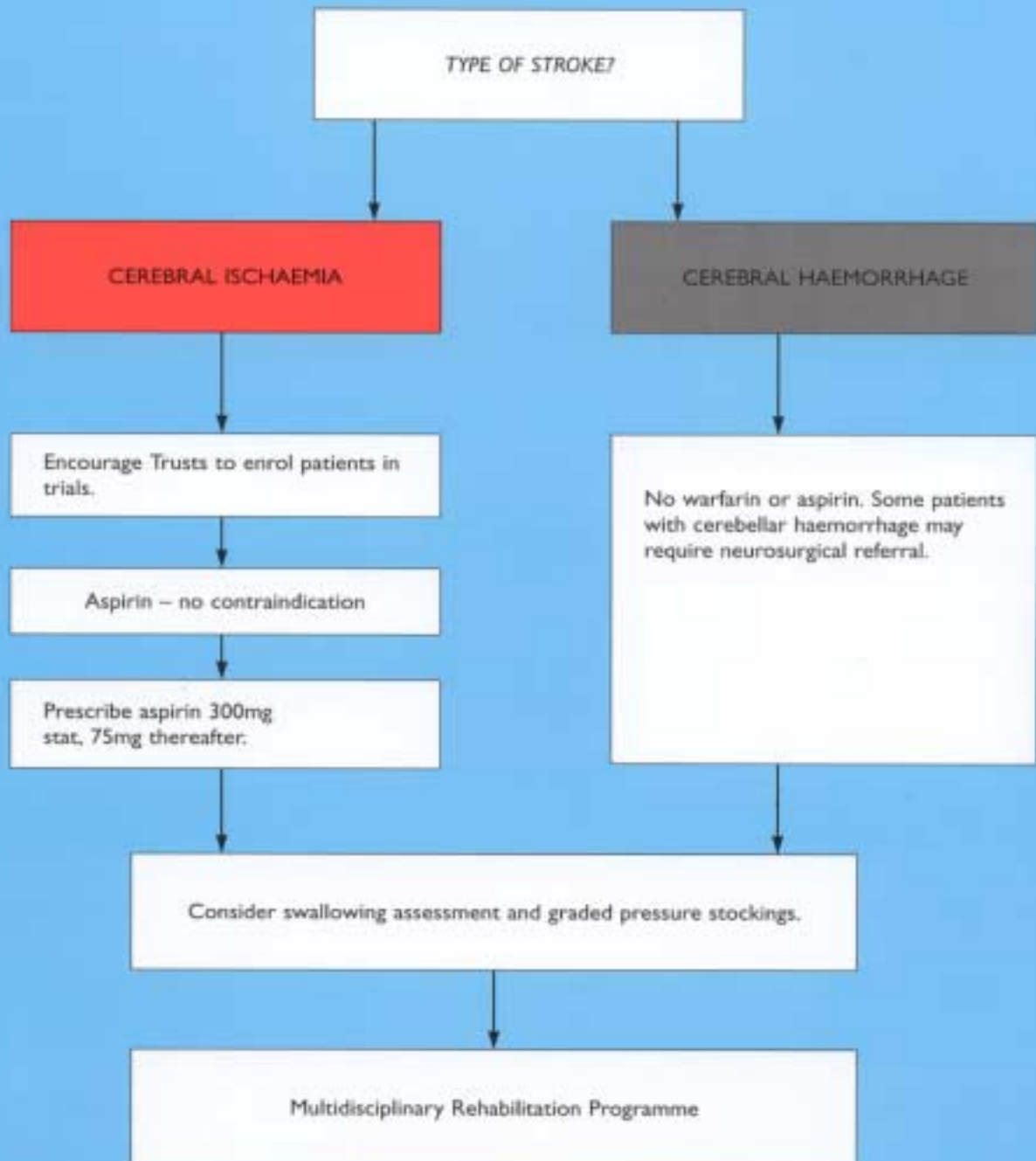
- (1) pharmacological approaches for the treatment of patients with cerebral ischaemia and haemorrhage;
- (2) a regional approach to the introduction and use of new drugs which ensures equity of drug treatment for patients, with safe and cost effective prescribing;
- (3) the monitoring of the overall prescribing of such drugs in Northern Ireland.

This guidance represents the consensus view of the group. It is interim guidance covering the drugs currently available or likely to become available in the near future. It will be revised as new drugs become available.

The treatment recommendations in this consensus statement apply only to ischaemic events. Cerebral haemorrhage will need to be excluded before treatment is initiated. Whenever feasible this should be done as soon as possible with a CT scan.



## DIAGNOSIS AND MANAGEMENT OF ACUTE STROKE





SECONDARY PREVENTION

CEREBRAL ISCHAEMIA

CEREBRAL HAEMORRHAGE

TIA/Ischaemic Stroke and Atrial Fibrillation

Yes

No

Consider long term warfarin.

If contraindicated

Aspirin 75mg daily.

Investigation of any underlying bleeding tendency.  
Investigation of possible brain lesion.

Refer for consideration of carotid surgery, patients who have non-disabling stroke/TIA with 70% carotid stenosis of the appropriate side and where the event has occurred within 4 months of anticipated operation date.

- Manage**
- Diabetes
  - Hypertension
  - Hyperlipidaemia

- Modify Lifestyle Factors**
- Smoking
  - Alcohol
  - Diet and Exercise

## **1. Epidemiology and cost of stroke treatment**

Stroke is the third most common cause of death in the United Kingdom and a major cause of disability. The overall incidence is estimated to be 2.4 per 1000 for first strokes, although this is concentrated in the older age groups. This does not specifically refer to Northern Ireland.

The cost of stroke treatment in Northern Ireland is estimated to be 4.4% of all NHS expenditure.

## **2. Development of new drug treatments**

Recent years have seen considerable research into effective drug treatments for acute stroke and for primary and secondary prevention of stroke. Several drugs are currently available or in advanced stages of development, but at least twelve other drugs are known to be under investigation for their effects in acute stroke.

## **3. Organisation of care in acute stroke**

- 3.1 Outcomes for patients with acute stroke can be improved by effective organisation of services. Specialist stroke units have been shown to reduce rates of death, dependency and institutionalisation. The key components of these units include co-ordinated multidisciplinary rehabilitation, programmes of education and training in stroke and specialisation of medical and nursing staff.
- 3.2 There are currently at least five stroke units in the province. These vary in the type and model of care provided, but are mostly multidisciplinary units composed of staff with a special interest in stroke care.
- 3.3 It is recommended that each acute hospital should identify a senior clinician as a dedicated stroke specialist. Stroke should be recognised as a medical emergency and early assessment and intervention provided for all patients. This will include the management of risk factors for further stroke. Criteria for good stroke care should be established and used as a benchmark for assessing and comparing units.

## **4. Antiplatelet agents**

- 4.1 Antiplatelet agents have been clearly shown to be of benefit in the prevention of recurrent stroke and inpatients who have suffered transient ischaemic attacks. Aspirin has been shown to reduce the chances of further thromboembolic events by 20 - 25%. It is therefore of benefit in the management of acute stroke and secondary prevention.



- 4.2 Aspirin should be prescribed once the diagnosis of cerebral infarction or transient ischaemic attack has been made, except in the small number of patients in whom this is contraindicated. In the acute phase 300mg is required for the loading dose. For secondary prevention the recommended dose is 75mg daily, as a dispersible tablet.
- 4.3 Clopidogrel is a new antiplatelet agent. It is recommended that this is reserved for secondary prevention of stroke in patients who are intolerant of aspirin. The recommended daily dose is 75mg.
- 4.4 There is insufficient evidence to support the use of dipyridamole in any formulation in first line treatment. It may have a role in combination with aspirin for patients with recurrent events. In patients who are to be prescribed dipyridamole it is recommended that the lowest cost preparation is used.

## **5. Thrombolytic agents**

- 5.1 No product is currently licensed for this indication in UK. Products under consideration include alteplase and streptokinase.
- 5.2 A number of trials have suggested that patients suffering from acute cerebral ischaemia may benefit from thrombolytic agents, with a reduction in death and disability at three and six months. This benefit is countered by an increase in early death due to cerebral haemorrhage.
- 5.3 Thrombolytic agents must be given within a few hours of onset and cerebral haemorrhage must be excluded prior to treatment. The widespread adoption of thrombolytic therapy would therefore have considerable resource implications in terms of transport and scanning facilities.
- 5.4 Current evidence does not support the widespread adoption of thrombolytic therapy or investment in scanning equipment. Thrombolytic therapy should currently be restricted to licensed indications or randomised controlled trials in those specialised centres with access to urgent CT scanning.

## **6. Anticoagulation**

- 6.1 There is no evidence to support the use of anticoagulants for the treatment of acute stroke. There is however strong evidence that patients in atrial fibrillation who have had a TIA or an ischaemic stroke should receive a long term treatment with warfarin (suggested target as close to INR 2.5 as possible) as this greatly reduces the long term risk of embolic stroke. If there is a contraindication to warfarin, aspirin should be used. Warfarin and aspirin should only be given together in exceptional circumstances.

## **7. Complications of stroke**

It is important to remember that complications may arise, particularly in the acute phase, eg the development of aspiration pneumonia associated with dysphagia.

## STROKE GUIDANCE - MAJOR REFERENCE

CAST – randomised placebo-controlled trial of early aspirin use in 20,000 patients with acute ischaemic stroke. *Lancet* 1997; 349: 1641-49

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