Question 88

In a patient with acute ischaemic stroke, which one of the following treatments is the most appropriate early intervention?

A. Aspirin  
B. Streptokinase  
C. Low molecular weight heparin  
D. Unfractionated heparin  
E. Warfarin

Answer is A

From UK guidelines of college of physicians here: http://www.rcplondon.ac.uk/pubs/books/stroke/
Australian guidelines from National Stroke Foundation here; http://www.strokesafe.com.au/pages/article.aspx?id=1&articleid=ArticleID2006526135335&pageId=159&HandlerId=1

3.1 Diagnosis and investigations

Effective early management of acute stroke and transient ischaemic attack can reduce mortality and morbidity as well as reducing waste of scarce health and social services resources. The evidence from the Stroke Units Trialists’ Collaboration shows that nonspecialist disorganised care costs lives, increases dependency and is not cost effective.

3.1.1 Investigation and management of patients with transient ischaemic attack

The risk of developing a stroke after a hemispheric TIA can be as high as 20% within the first month, with the greatest risk within the first 72 hours.

Recommendations

a) Patients first seen in the community with TIA, or with a stroke but having made a good recovery when seen, should be assessed and investigated in a specialist service (eg neurovascular clinic) as soon as possible within seven days of the incident (B*)

b) Patients likely to have a diagnosis of TIA should be prescribed an alternative antiplatelet regime immediately (B)

c) Patients with more than one TIA in a week should be investigated in hospital immediately (B)

d) Risk factors for cerebrovascular disease such as severe hypertension should be treated appropriately or the patient referred for specialist management (A)

Recommendations

a) The diagnosis should always be reviewed by an experienced clinician with expertise in stroke. The assessment and investigation should include identification of possible underlying cardiovascular causes (B*)

b) The initial neurological assessment should document the localisation of the likely cerebral area affected (C)

c) Brain imaging should be undertaken as soon as possible in all patients, within 24 hours at most of onset unless there are good clinical reasons for not doing so (B*)

d) Brain imaging should be undertaken as a matter of urgency if the patient has: (B)

- been taking anticoagulant treatment
- a known bleeding tendency
- a depressed level of consciousness
- unexplained progressive or fluctuating symptoms
- papilloedema, neck stiffness or fever
- severe headache at onset
- indications for thrombolysis or early anticoagulation

e) If the patient deteriorates unexpectedly further brain imaging should be considered to identify intracranial complications, eg hydrocephalus or haemorrhagic transformation (B)
If the underlying pathology is uncertain, or the diagnosis of stroke is in doubt after CT scan, MRI should be considered (B).

Cross-sectional MRI should be performed when imaging has been delayed for more than 10 days after stroke (B).

3.2 Immediate (medical/surgical/nursing/therapy) interventions for stroke

Stroke is a medical emergency. With active management in the initial hours after stroke onset ischaemic brain may be saved from infarction.

3.2.1 Initial screening and monitoring

Recommendations

a) The patient should be assessed on admission for:
   - their risk of aspiration, using a validated 50 ml water swallow screening tool, administered by an appropriately-trained professional (B)
   - their needs in relation to moving and handling (C)
   - their risk of developing pressure sores (C)

b) Monitoring in the acute phase should include: conscious level, blood pressure, pulse, heart rhythm, temperature, blood glucose, oxygen saturation and hydration (D).

3.2.2 General interventions

Recommendations

a) Blood glucose, arterial oxygen concentration, hydration and temperature should be maintained within normal limits. Infection should be actively managed unless the patient is receiving palliative care (B).

b) Blood pressure should only be lowered in the acute phase where there are likely to be complications from hypertension, eg hypertensive encephalopathy, aortic aneurysm with renal involvement (B).

c) Patients should be mobilized as soon as possible (B).

3.3 Management of acute ischaemic stroke

3.3.1 Thrombolysis

Thrombolysis has the potential to improve outcome of patients with cerebral ischaemia, however it is a high-risk treatment and should only be administered by personnel trained in its use, in a centre equipped to investigate and monitor patients appropriately. Evidence from Phase IV studies on intravenous thrombolysis in North America has shown that unless the protocols for treatment are strictly adhered to outcomes are worse. The evidence for the benefits of intra-arterial thrombolysis remains limited.

3.3.2 Anti-thrombotic treatment

Recommendations

a) Aspirin (300 mg) should be given as soon as possible after the onset of stroke symptoms once a diagnosis of primary haemorrhage has been excluded. In dysphagic patients aspirin should be given rectally or by enteral tube (A*). Thereafter aspirin (50–300 mg) should be continued indefinitely until an alternative antiplatelet therapy is started (see section 3.5).

b) Aspirin should be delayed for 24 hours following thrombolysis (A).

c) Anticoagulation should not be initiated routinely for the treatment of acute ischaemic stroke, including progression (A).
Year 2003 Paper two: Questions supplied by Tricia

From Australian guidelines here

Guidelines:
a) If CT scan excludes haemorrhage, aspirin (150-300mg) should be given as soon as possible after the onset of stroke symptoms.
b) No other drug treatment aimed at the treatment of stroke should be given unless part of a Randomised Controlled Trial (RCT).
c) The routine acute use of anticoagulation (eg. IV unfractionated heparin) in unselected patients following ischaemic stroke/TIA is not recommended.
d) Drugs that have been used historically or traditionally for which there is no evidence of benefit from RCT (eg steroids, haemodilution, glycerol, etc) should be avoided.
e) The use of alternative therapies or complimentary medicines, should be discussed by the treating physician with the patient, and in the absence of RCT evidence of benefit should be discouraged. Of particular importance are therapies that may interact with those prescribed by the treating physician (eg. Ginkgo biloba and antiplatelet therapy).