Kijabe OPD Guidelines



Stroke

- Neurological deficit attributed to an acute focal injury of the CNS by a vascular cause
- **Ischaemic stroke 80-87%** occlusion of artery by clot (thrombus in brain artery or embolus from heart or major artery)
- Haemorrhagic stroke 13-20% a weakened vessel ruptures or a coagulation defect leads to bleeding into surrounding brain
- A leading cause of death and disability worldwide. Stroke occurs at a younger age in LMICs, often affecting people at the peak of their productive lives.
- Hypertension is the most modifiable risk factor for stroke
- TIA (transient ischaemic attack) features of a stroke but resolves <24 hours.

TIAs are a warning sign for stroke – 20% go on to have a stroke in the next 3 months (especially the first few days). <u>Consider</u> TIA as small ischaemic stroke.

Risk Factors for Stroke

Both types: age, hypertension, alcohol **Ischaemic:** male sex, diabetes, cardiac disease, AFib, smoking, obesity, lack of exercise, high cholesterol, sickle cell, HIV, COCP use

Haemorrhagic: coagulopathies, eclampsia, intra-cerebral vascular malformations, anticoagulant and thrombolytic therapy, vasculitis, brain tumour

Management of acute stroke/TIA

FAST test:

Face: ask the person to smile – does one side of the mouth or face drop?

Arms: can both be raised? Does one drift downwards? Speech: can they repeat a sentence correctly? Do they slur words?

Time: If anything is abnormal do something, now!

Symptoms of acute stroke/TIA

Simultaneous history and examination

History – determine time of onset, progression symptoms, risk factors and co-morbidities

Examination – ABC, pulse regular? GCS, glucose, signs of CNS infection or trauma, FAST test, CV and resp exam, more detailed CNS examination as appropriate (but do not delay action)

Likely stroke:

- Focal cerebral/retinal symptoms
- Motor or sensory weakness in 2 limbs, or 1 limb and the face
- Homonymous hemianopia or monocular blindness
- Aphasia or dysarthria

Possible stroke (especially if >1 of these): unsteady gait, diplopia, vertigo/dizziness, dysphagia

Stroke less likely: amnesia, confusion, transient loss of consciousness, incoordination of limbs, partial sensory deficit, visual hallucinations. It is not possible to tell from symptoms if a stroke is ischaemic or haemorrhagic, but sudden onset severe headache, vomiting +/- loss of consciousness more likely with haemorrhage

TIA suspected

(complete resolution of symptoms <24h)

- Discuss with consultant
- Aspirin 300mg start immediately and continue for 2 weeks (if no contraindications); then continue longterm as for ischaemic stroke (page 2)
- Consider need for CT head scan (may not be necessary if diagnosis clear as TIA indicates ischaemia)
- Look for and treat all modifiable risk factors
- Check HbA1c, creatinine, urine protein and other tests as indicated (no need to check lipids as statin is indicated anyway)
- ECG for ?AFib or other signs of heart disease
- Secondary prevention as for ischaemic stroke (page 2)

Acute CVA suspected

- Urgent head CT (no contrast)
- Admit to casualty for further assessment
- Need for admission depending on severity and ability to swallow
- See Emergency guidelines for BP management

Haemorrhagic stroke confirmed

- Intracerebral or subarachnoid haemorrhage?
- Neurosurgical consult as necessary

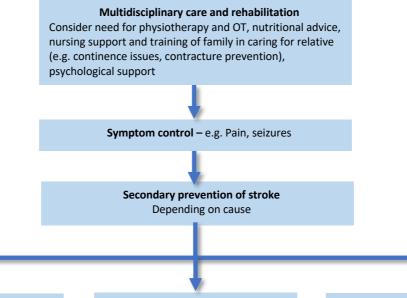
Ischaemic stroke confirmed

- Consideration for thrombolysis (if within 4.5h of onset symptoms) See Emergency guidelines
- If no thrombolysis, Aspirin 300mg OD for 2 weeks, then long-term low dose (page 2)
- If AFib as cause, treat with aspirin 300mg OD for 2w BEFORE considering anticoagulation
- Statin
- Multidisciplinary supportive care and rehabilitation
- Look for and treat modifiable risk factors/causes
- Long-term follow up and secondary prevention (page 2)

Kijabe Hospital Health Care to God's Glory

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Long term management of stroke



Secondary prevention of ischaemic stroke

A – antiplatelets* (aspirin 300mg OD for 2 weeks after acute stroke, then 75mg OD for life; clopidogrel 75mg OD if aspirin not tolerated; + omeprazole 20mg OD if symptomatic)

or anticoagulants if AFib (after initial 2 weeks aspirin 300mg OD post stroke, switch to rivaroxaban – see AFib guideline)

B - blood pressure-lowering medication. Target as with all hypertension: <140/90 if <80y; <150/90 if >80y;

<130/80 if CKD + proteinuria

C - cessation of cigarette smoking, cholesterol-lowering medication High dose atorvastatin (start 40mg OD then increase to 80mg if tolerated and affordable). No need to check lipids as statin indicated anyway

D - diet, diabetes control

E - exercise

*Some patients are discharged from hospital with dual anti-platelet therapy. This is usually to be dropped down to single agent after 3 weeks, but if plan not clear please discuss with consultant or cardiologist

Secondary prevention after haemorrhagic stroke

Treat underlying cause Control risk factors, especially BP No specific secondary prevention; statin not indicated

Cause unknown; scan not possible

Control CV risk factors, especially BP Likely benefit of aspirin will outweigh risks in the long-term, but patientspecific assessment required

References

Kenya National Guidelines for Cardiovascular Diseases Management, MOH 2018; Stroke: a global response is needed, WHO http://www.who.int/bulletin/vol- umes/94/9/16-181636; Red Whale Update: stroke and TIA https://www.redwhale.co.uk/content/strokeand-tia; Up-To-Date accessed 20/10/23; Aspirin for secondary prevention after stroke of unknown etiology in resource-limited settings: a decision analysis, Aug 2014, Neurology