NHS Highland Stroke MCN

Protocol for Secondary Prevention Post-TIA or Ischaemic Stroke

(Starting 2 weeks post-ischaemic stroke or immediately post-TIA)

ANTIPLATELETS:

FIRST LINE:	**Aspirin 75mg daily and Dipyridamole MR 200mg twice daily**
SECOND LINE:	**Clopidogrel 75mg daily monotherapy**

Prescribing Information :

•It is expected up to 30% of patients will not be able to tolerate the dual antiplatelet therapy mainly due to headaches associated with dipyridamole. Consider titration of the dose to reduce this incidence ie dipyridamole MR 200mg once daily for 1 week then 200mg twice daily thereafter.

•Patients with documented hypersensitivity to aspirin, or patients unable to tolerate aspirin and dipyridamole dual therapy should receive clopidogrel 75mg daily monotherapy.

•Patients with documented hypersensitivity to clopidogrel and unable to tolerate the dual antiplatelet therapy may attempt aspirin 75mg daily or dipyridamole MR 200mg twice daily as monotherapy.

•For patients at risk of gastro-intestinal complications (known peptic ulcer or dyspepsia) co-prescribe a proton pump inhibitor.

•There is currently no evidence base for dual therapy with aspirin and clopidogrel or dipyridamole and clopidogrel.

•NSAIDs should be discontinued as they antagonise the antiplatelet effect of aspirin.

ANTIHYPERTENSIVES:

Perindopril erbumine 2mg daily titrating to 4mg
AND
Indapamide 2.5mg daily

Prescribing Information :

•All stroke types; haemorrhagic, ischaemic and TIA derive risk reduction in secondary events from tight blood pressure control, even in the normotensive patient.

•Initiate treatment with perindopril at 2mg and titrate after 2 weeks to maximum of 4mg daily if urea and electrolytes are stable and blood pressure is permissible.

•Check urea and electrolytes prior to initiation and then 1-2 weeks after initiation and each dose titration.

•Once stabilised on treatment, recheck urea and electrolytes annually.

•Once the above treatment has been maximised refer to 'Step Up Management of Essential Hypertension' guideline in the Highland Formulary for further advice regarding blood pressure control and treat to target.

Blood Pressure Target post-stroke/TIA: 140/85mmHg
(diabetics 130/80mmHg)

STATINS:

HIGH RISK PATIENTS:	Atorvastatin 80mg daily
MODERATE/LOW RISK PATIENTS:	Simvastatin 40mg at night

Prescribing Information :

•Prior to prescribing a statin, check non-fasting Total Cholesterol (TC), High-density Lipoprotein (HDL) and Triglyceride (TG) levels, as well as Liver Function Tests (LFTs) and Thyroid Function Tests (TFTs).

•Recheck TC, HDL, TG and LFTs at 12 weeks and titrate to reach minimum target of TC<5 and LDL<3.

•Note: Patients post-haemorrhagic stroke should not normally be prescribed a statin unless the risks of further vascular events outweigh the risk of further haemorrhage.

Defining High Risk Patients :

•A risk stratification strategy will be employed to ensure those with the best prognosis, who are at highest risk of recurrent events, are prescribed atorvastatin 80mg daily.

•Post-ischaemic stroke patients with a Modified Rankin Score (page 2) of ≤3 should be considered for atorvastatin 80mg daily.

•All post-TIA patients with a $ABCD^2$ score (page 3) of ≥ 6 should be prescribed atorvastatin 80mg daily.

•All patients with carotid artery stenosis ≥ 70% should be prescribed atorvastatin 80mg daily.

•Patients with three or more of the following risk factors would be considered at significantly High Risk of further cerebrovascular events and should be prescribed atorvastatin 80mg daily.

IHD/angina ☐	Previous MI ☐	Previous Stroke ☐
Previous TIA ☐	Diabetes ☐	Hyperlipidaemia ☐
Hypertension ☐	PVD ☐	TOTAL Score _____/8

•All other patients should be prescribed simvastatin 40mg at night to reduce the risk of other major vascular events.

MODIFIED RANKIN SCORE :

The Modified Rankin Score is a stroke outcome scale for disability post-stroke (Interpret with caution for causes of disability other than stroke).

Score	Symptoms	Description
0	No symptoms	No symptoms at all
1	No significant disabling symptoms	No significant disability despite symptoms; able to carry out all usual duties and activities.
2	Slight disability	Unable to carry out all previous activities but able to look after their own affairs without assistance.
3	Moderate difficulty	Requiring some help but able to walk without assistance.
4	Moderate/severe disability	Unable to walk without assistance and unable to attend to own bodily needs without assistance.
5	Severe disability	Bedridden, incontinent and requiring constant nursing care and attention
6	Dead	Dead

ABCD^2 SCORE :

The ABCD^2 Score identifies individuals at high risk of stroke after TIA.

	Risk Factor	Category	Score
A	Age of patient	Age ≥ 60 Age < 60	1 0
B	Blood pressure on assessment	>140/90mmHg Other	1 0
C	Clinical features at presentation	Unilateral weakness Speech disturbance (no weakness) Other	2 1 0
D	Duration of TIA symptoms	≥ 60 minutes 10-59 minutes < 10 minutes	2 1 0
D	Diabetes		1
		TOTAL	/7

ANTICOAGULANTS:

Warfarin

Prescribing Information :

•Withhold warfarin for 2 weeks post-ischaemic stroke to decrease the risk of haemorrhagic transfer.

•For patients presenting with stroke in AF while on warfarin, withhold the warfarin and prescribe aspirin 300mg daily for 2 weeks before recommencing warfarin.

•When restarting warfarin, antiplatelets should be continued until the INR is stable and at target (as per Highland Formulary).

•Warfarin should only normally be used for prevention of recurrent stroke in patients with cardioembolic ischaemic stroke.

•Patients with ischaemic stroke or TIA in atrial fibrillation should be considered for treatment with warfarin to target INR 2-3.

•In the absence of contra-indications patients >75 years old should also be offered warfarin.

•There is no evidence of benefit in co-prescribing aspirin and warfarin for the prevention of further strokes.

•Refer to the Highland Formulary for further advice on initiation and continued monitoring of warfarin.

Further Prescribing Information :

•It is expected that contra-indications and interactions as per the BNF will be assessed for patients on an individual basis prior to prescribing any medication.

•Please refer to the Highland Formulary, www.sign.ac.uk, www.nice.org.uk and www.rcplondon.ac.uk for further information.