improving primary care after stroke

A Comparison of National Guidelines for Secondary Prevention of Ischaemic Stroke

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BACKGROUND

National guidelines for secondary prevention of ischaemic stroke are developed independently, therefore they could reach different conclusions or offer different recommendations based on the same body of evidence.

AIM

To compare recommendations on the use of statins, antiplatelet drugs and antihypertensive drugs from national guidelines on the secondary prevention of ischaemic stroke.

METHODS

Search: A grey literature search for guidelines was performed using the inclusion and exclusion criteria is shown in the table 1.

Quality assessment: Guideline quality was assessed using the validated Appraisal of Guidelines for Research and Evaluation (AGREE II) instrument. Assessment of each document was performed by two reviewers and their scores combined.

Comparison of recommendations: Two independent reviewers completed a systematic comparison of indication, choice of drug and outcome targets for cholesterol lowering antiplatelet and antihypertensive drugs. These reviews were then compared, and disagreements in interpretation were resolved by discussion. Where consensus was not achieved, a third reviewer acted as arbiter.

Table 1: Inclusion and Exclusion criteria for the grey literature search of guidelines

Inclusion Criteria	Exclusion Criteria
Full guideline with explanatory guidance	Abridged or summary guidelines
National	International or regional
English language documents	Other than English language
Countries with well established primary care systems	
Target audience: medical professionals	Target audience: patients or carers
Scope: medication recommendations for secondary prevention of ischaemic stroke in people over 18 years of age.	

RESULTS

Guidelines from National Institute for Health and Care Excellence (NICE), Royal College of Physicians (RCP), Scottish Intercollegiate Guidelines Network (SIGN), American Heart Association (AHA), National Stroke Foundation (NSF) and Canadian Stroke Best Practice Recommendations (CSBP) were identified. All guidelines recommend antiplatelet therapy and statins, but differ with regard to choice of antiplatelet drug and lipid targets. More substantial variation exists within the recommendations for anti-hypertensive therapy, with no agreement on the threshold to initiate treatment, choice of drug or target blood pressure. Only NICE and RCP recommend selection of antihypertensive drugs according to age and ethnicity.

Table 2: Comparison of the recommendations on statins.

Recommendation	NSF	CSBP	SIGN	RCP	NICE	AHA
Indication: Stroke or TIA	✓	✓	✓	✓	✓	✓
First line therapy: High intesity statin e.g. atorvostatin	×	×	✓	✓	✓	✓
First line therapy: Not specified	✓	✓	×	×	×	×
Lipid target: ≥50% reduction in LDLC	×	✓	×	×	×	✓
Lipid target: >40% reduction in non-HDLC	×	×	×	✓	✓	×
Lipid target: Not specified	✓	×	✓	×	×	×

Table 3 Comparison of the recommendations on anti-platelets

Recommendation	NSF	CSBP	SIGN	RCP	NICE	AHA
Indication: Stroke or TIA and no indication for anticoagulation	✓	✓	✓	✓	✓	✓
First line therapy: Clopidogrel	✓	✓	×	✓	✓	✓
First line therapy: Aspirin plus dipyridamole	✓	✓	✓	×	×	×
First line therapy: Aspirin	×	✓	×	×	×	✓

Table 4: Comparison of the recommendations for anti-hypertensives.

Recommendation	NSF	CSBP	SIGN	RCP	NICE	AHA
Indication: Stroke or TIA and no blood pressure threshold	✓	✓	✓	×	×	×
Indication: Stroke or TIA and systolic blood pressure >130mmHg	×	×	×	✓	×	×
Indication: Stroke or TIA and blood pressure ≥140/90 mmHg	×	×	×	×	×	✓
Indication: Stroke or TIA and blood pressure ≥135/85 mmHg	×	×	×	×	✓	×
First line therapy: ACE inhibitor and diuretic combination	×	✓	✓	×	×	✓
First line therapy for >55 years or African or Caribbean family origin: CCB / thiazide diuretic First line therapy for <55 years and not of African or Caribbean origin: 1)ACE inhibitor /ARB	×	×	×	✓	✓	×
First line therapy: Not specified	✓	×	×	×	×	×
Target blood pressure: <140/90 mmHg	×	✓	×	×	×	✓
Target blood pressure: <140/85 mmHG	×	×	✓	×	×	×
Target blood pressure: Systolic <130mmHg	×	×	×	✓	×	×
Target blood pressure: < 80 years: <140/90 mmHg or ≥ 80 years: <150/90 mmHg	×	×	×	×	✓	×
Target blood pressure: Not specified	✓	×	×	×	×	×

DISCUSSION

Whilst there is agreement that blood pressure lowering, cholesterol lowering and antiplatelet therapy are indicated post-stroke, there are also substantial areas of disagreement: over choice of antihypertensive and antiplatelet therapy, dose of statins, and target levels for both blood pressure and cholesterol. For such nuances of management, these discrepancies suggest that guidelines should remain advisory rather than be prescriptive.

CONCLUSION

International guidelines apply different research evidence to the same clinical question, and often there are differences in interpretation of this evidence, leading to differing conclusions. The recommendations laid down in guidelines should therefore remain advisory rather than prescriptive. Guidelines that are too directive (e.g. in terms of specific drugs or doses) may lead to problems with implementation in clinical practice.

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